UNIVERSITY OF PENNSYLVANIA

MEASURING CERTAIN ASPECTS OF FAITH IN GOD AS FOUND IN BOYS AND GIRLS

FIFTEEN, SIXTEEN, AND SEVENTEEN YEARS OF AGE

HAROLD I. DONNELLY

A THESIS

IN EDUCATION

PRESENTED TO THE FACULTY OF THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

PHILADELPHIA
1931

MEASURING CERTAIN ASPECTS OF FAITH IN GOD AS FOUND IN BOYS AND GIRLS

FIFTEEN, SIXTEEN, AND SEVENTEEN YEARS OF AGE

A THESIS

IN EDUCATION

PRESENTED TO THE FACULTY OF THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

BY

HAROLD I. DONNELLY

PHILADELPHIA

1931

*24817

R. UNIV.
BIBLIOTHEEK
LEIDEN

COPYRIGHT, 1931, BY
THE WESTMINSTER PRESS

Printed in the United States of America

Digitized by the Internet Archive
in 2026

https://archive.org/details/IA41547328_0010

INTRODUCTION

This study was undertaken primarily as a project of the Department of Educational Research of the Presbyterian Board of Christian Education. That Department was faced with the need for instruments which would measure some of the more fundamental outcomes desired as a result of religious education. Such instruments are essential in determining experimentally the value of materials and methods. As a step in this direction, the Director of the Department of Research undertook to build a test to measure certain aspects of faith in God. This test, in addition to its possible value as a test, would help to determine the validity of certain testing techniques.

The study was begun at the advice and with the encouragement of Dr. A. Duncan Yocum, of the University of Pennsylvania. Since the writer, while the Director of the Department of Research was working in the Graduate School of the University for an advanced degree in Education, the proposed study was presented to his Dissertation Committee, of which Dr. Yocum was Chairman. The other members of the Committee were Dr. Arthur J. Jones and Dr. LeRoy A. King. The Committee agreed to become advisory to the project and made many valuable suggestions as to procedure and technique.

As the study progressed, testing and statistical techniques became more and more necessary. Therefore, at the suggestion of Dr. Yocum, Dr. King became Chairman of the Committee, and the study was completed under his able leadership, the membership of the Committee remaining unchanged. To the members of this Committee, Dr. A. Duncan Yocum, Dr. Arthur J. Jones, and Dr. LeRoy A. King, Chairman, the author expresses his appreciation for their helpful guidance.

Many leaders and pupils in various parts of the United States have contributed to this study. It is impossible to name them all but the author desires to express to each his sincere appreciation. Especially does he wish to thank the staff of the Department of Educational Research of the Presbyterian Board of Christian Education for their careful and efficient help in the details of the study, and the many others whose aid has been enlisted in checking data and statistical procedure and in preparing the manuscript.

HAROLD I. DONNELLY.

TABLE OF CONTENTS

		PAGE
CHAPTER I.	The Scope of the Study	11
	The Need for Such a Test; Tests in the Field; The Procedure of the Study.	
CHAPTER II.	Construction of the Test in Its Preliminary Stages	18
	Collecting the Materials; Relationship Between the Parts; Plans for Establishing Validity; Precautions Taken.	
CHAPTER III.	Revision of the Test on the Basis of Its Use	31
	Pupil Groups; The Group of Judges for Scaling Part III; Results of Preliminary Use; Some Tentative Correlations.	
CHAPTER IV.	Pupil Reactions to the Revised Test	56
	Character of the Pupil Groups; Pupil Reactions to Each Part of the Test.	
CHAPTER V.	Validity, Reliability, and Norms	77
CHAPTER VI.	General Summary and Conclusions	89
APPENDIX 1.	Directions to Judges for the Scaling of Statements in Part III	90
2.	Transmutation Charts for Scoring	91
3.	Preliminary Form of the Test.....	94
4.	Experimental and Final Form of the Test....	103
5.	Bibliography	114

LIST OF TABLES

TABLE I.	Representative Character of Church School Group	32
TABLE II.	Select Character of Church School Group	33
TABLE III.	Certain Characteristics of 192 High School Boys and Girls	34
TABLE IV.	Representative Character of 120 Judges Scaling Items in Part III	35
TABLE V.	Per Cent of Pupils Checking Part I Correctly	38
TABLE VI.	Per Cent of Pupils Checking Score Items in Part II	40

		PAGE
TABLE VII.	Per Cent of Pupils Checking Statements in Part III	43
TABLE VIII.	Average Scale Rating of 120 Judges Grouped Cumulatively	44
TABLE IX.	Statements Ranked on Basis of Judges' Scaling, Showing Per Cent of Pupils Checking Statements	47
TABLE X.	Per Cent of Pupils Checking Each Item in Part IV	50
TABLE XI.	Representative Character of Church School Group	57
TABLE XII.	Nationality of Parents—Church School Group	58
TABLE XIII.	Select Character of Church School Group	59
TABLE XIV.	Character of High School Group	60
TABLE XV.	Per Cent of Pupils Checking Part I Correctly	62
TABLE XVI.	Per Cent of Pupils Checking Score Items in Part II	63
TABLE XVII.	Number of Pupils Crossing Out Items in Part II	64
TABLE XVIII.	Character of 130 Judges Scaling Items in Part III	65
TABLE XIX.	Per Cent of Pupils Checking Items in Part III	66
TABLE XX.	Average of 250 Judges' Ratings of Items in Part III Arranged by Groups	68
TABLE XXI.	Items of Part III in Order of Judges' Scaling with Number of Pupils Checking Each	69
TABLE XXII.	Mean Scale Value, Standard Deviation, and Pupil Response of Items Selected for Scale in Part III	71
TABLE XXIII.	Per Cent of Pupils Checking Each Item in Part IV	72
TABLE XXIV.	Number of Pupils Crossing Out Questions in Part IV	75

LIST OF CHARTS

		FOLLOWING PAGE
CHART 1.	Per Cent of Pupils of Each Chronological Age	60
CHART 2.	Grade Distribution of Church School and High School Pupils	60
CHART 3.	Per Cent of Church School Pupils Checking Each Scale Item	70
CHART 4.	Distribution of Pupil Scores on Part I	80
CHART 5.	Per Cent of Pupils Making Each Score on Part II	80
CHART 6.	Per Cent of Pupils Making Each Score on Part III	80
CHART 7.	Per Cent of Pupils Making Each Score on Part IV	80
CHART 8.	Per Cent of Pupils Making Various Total Test Scores	80

CHAPTER I

THE SCOPE OF THE STUDY

The purpose of this study is the development of an instrument which will measure certain phases or aspects of faith in God as found in boys and girls in the last three years of high school, grades 10, 11, and 12, or in the Senior Department of the Church School, which covers approximately the chronological ages, fifteen, sixteen, and seventeen.

In the actual development of the test, the group was limited on the basis of chronological age since this was the only basis of classification common to both the high school and the Church School. Within the field of religious education the chronological age of the pupil is generally used as the basis for classification. The Senior Department of the Church School is usually defined as including boys and girls of fifteen, sixteen, and seventeen years of age.[1]

In this study, faith in God is assumed to be an attitude which includes three phases or aspects: belief in God, which is largely intellectual; trust or confidence in God, which is dominantly emotional; together with an influence upon actual conduct in meeting the situations of life. This assumption has been checked by a large group of religious educators through correspondence and group conferences, and by actual review of the test in its various forms. In no case has it been questioned. Therefore, the assumption seems reasonable, and these three phases or aspects of faith in God are used as the basis for this study.

The test as developed makes no attempt to measure faith in God in its entirety. It does not assume that the three aspects or phases described above constitute all of faith in God, nor even that they are the most important elements in such an attitude. These three phases are selected on the assumption that they are

[1]Athearn, Walter S., "The Church School," p. 33, gives chronological age as the basis of Church School classification of pupils. Stout, John E., "Organization and Administration of Religious Education," pp. 227-239, and Munro, Harry C., "The Church as a School," p. 62, both suggest better and more scientific bases for classification.

elements in the attitude of faith in God which seem to offer possibilities of measurement.

The term "God," as used in the study, is given a broad interpretation so that it will include any conception of a supreme Being, Law, or Force operating in or behind the universe.

THE NEED FOR SUCH A TEST

In the field of religious education the important outcomes which are desired in the lives of boys and girls are not so much in terms of knowledge as they are in terms of attitudes, habits, ideals, and the like. Among these faith in God is one of the most important. Dr. Paul Vieth[2] has summarized the statements of objectives as given by the ten leading religious educators of the present day. This summary lists faith in God as the first of the seven major objectives:

"1. To foster in growing persons a consciousness of God as a reality in human experience and a sense of personal relationship to him."

In discussing this objective, Dr. Vieth says[3]:

"A distinguishing mark of a religious experience is its recognized bearing upon the relationship set up between the individual and God."

The seven major objectives referred to above have been widely accepted by various groups and denominations and now appear as the objectives of the coöperative curriculum work carried on by the denominations under the leadership of the International Council of Religious Education.[4]

With faith in God as a major objective in the field of religious education, there is need for the development of tests which will provide some means for measuring this attitude. The present study is an effort to meet in part this need.

Not only is faith in God an objective of religious education, but it is also frequently included among the objectives of public secondary education. In the Sixth Yearbook of the Department

---

[2]Vieth, Paul H., "Objectives in Religious Education," p. 80.
[3]Ibid., p. 98.
[4]Ibid., p. 80.

of Superintendence, the following statement of objectives is given[5]:

"The general objectives of all education may be stated as follows:

"1. To promote the development of an understanding and an adequate evaluation of the self.

"2. To promote the development of an understanding and an appreciation of the world of nature.

"3. To promote the development of an understanding and an appreciation of organized society.

"4. To promote the development of an appreciation of the force of law and of love that is operating universally.

"The individual self, nature, society, and God—these four, and in particular the adjustments which the individual self must make—constitute the objectives of education."

In elaborating the fourth objective listed above, the report continues as follows[6]:

"4. *To promote the development of an appreciation of the force of law and of love that is operating universally.* Man craves more than a knowledge of himself, of nature, and of organized society. He hungers and he thirsts after righteousness. Knowing his own imperfections, he feels that somewhere is perfection. The great universe calls to his spirit, and, unless he ignorantly or willfully closes his ears, he hears the voice of God. No question of theology or of ecclesiastical polity is involved here. The individual soul reaches out to orient itself in the universe and to find its place of labor and of rest. No partial view suffices. Only the view of the whole, the *Weltanschauung*, will make it possible to interpret the meanings of day by day experience. When this orientation takes place, life assumes poise, dignity, grandeur. Otherwise its striving, its struggles, its achievements seem trivial and insignificant.

"No greater task rests upon the secondary school than to help its pupils to find their God. How this is to be done is the greatest of problems. Of one thing only are we sure: We cannot solve this problem by ignoring it. There is no single way to apprehend Infinity. Each in his own way may draw near."

Dr. Arthur J. Jones, in his book "Education and the Individ-

[5]Sixth Yearbook of the Department of Superintendence of the National Education Association, p. 52.

[6]Ibid., p. 54.

ual," says that education, dealing as it does with certain ends that must be attained in human beings, will naturally be complex so far as purpose is concerned. The ultimate end of education will have several aspects, not mutually exclusive but supplementary. These aspects he names as biological, social, ethical, and religious. He continues[7]:

"The purpose or aim of education from the standpoint of religion is:

"1. The development of a belief in a Supreme Being, the form of the belief differing with each type of religious group, and the intensification of this belief by a knowledge of the religious history of the group, and an appreciation of the lives of noble men and women who have exemplified the religious ideals.

"2. The formation of the habits, customs, and methods of worship characteristic of the religion or sect.

"3. The development, deepening, and maintenance of the feeling of personal relationship to this Supreme Being."

From these statements of purpose in both the field of religious education and the field of general education, it is evident that faith in God is recognized as a major objective. There is need, then, for some measurement or instrument which will test the degree to which the attitude of faith in God has been developed in pupils. Such instruments are necessary as measures of progress. At the same time, they will be valuable as a basis for comparing the effectiveness of specific methods and materials proposed for use in developing these attitudes. Any scientific experimentation with the varying theories for the development of religious attitudes must await the preparation of accurate instruments for the measurement of such attitudes.

TESTS IN THE FIELD

At present there are no tests which are adequate for the purposes outlined above. The tests that have been developed deal with the content of information about religious questions, with the intellectual aspects of religion, or with some general attitudes. All the published standardized tests in the field of this study have

[7]Jones, Arthur J., "Education and the Individual," p. 30.

been examined.[8] Among the most important of these are the following:

1. "Multiple-Choice Test of Religious Ideas," by Clara F. and Laura Chassell, is based upon ten questions of fundamental importance in Protestantism, selected for use because of their significance and inclusiveness. The purpose of the test is the discovery of the religious ideas of individuals, both children and adults. One of the questions used is, "How do you think of God?"[9]

2. "Religious Beliefs" (Northwestern University Religious Educational Tests) includes, among other questions on religious beliefs, a group of questions on belief about God.[10]

3. "Religious Thinking Test, Advanced" (Association Press) includes a series of questions on ideas of God.[11]

4. "Character Growth Tests" (Association Press) cover the more general aspects of ethical judgment. They are prepared in duplicate forms, for young men, older boys, and younger boys.[12]

5. "A Test of Social Beliefs and Attitudes," by Manley H. Harper, is a true-false test on economic, social, political, religious, and educational ideas.[13]

6. "Ethical Discrimination Test," by S. C. Kohs, is based on the

---

[8]A complete list of tests in religious education, as of July 1, 1926, is given by Dr. Goodwin B. Watson in his book, "Experimentation and Measurement in Religious Education," pp. 67-125. This is brought up to date by a mimeographed document, issued in mimeographed form for confidential use by professional workers, under the title, "Series of Character and Personality Tests." It is described as "a fairly complete list of character and personality tests now available." The Editorial Committee which compiled the list consists of J. M. Artman, Ernest J. Chave, W. L. Hanson, Hugh Hartshorne, Otto Mayer, P. M. Symonds, and Goodwin B. Watson.

[9]Chassell, Clara F. and Laura, "Multiple-Choice Test of Religious Ideas." Boston University School of Religious Education, Boston. Construction, standardization, and use of the test described in the Indiana Survey of Religious Education, Vol. II, pp. 430-450; also in Religious Education Vol. XVII (February, 1922), pp. 55-60.

[10]"Religious Beliefs." Northwestern University Religious Educational Test, Evanston, Illinois, 1927. (Mimeographed.)

[11]"Religious Thinking Test, Advanced." Association Press, New York. Revised from the "Union Tests of Religious Ideas, Form II."

[12]"Character Growth Tests." Association Press, New York. Three sets of tests for (1) young men, eighteen to twenty-five; (2) older boys, fifteen to eighteen; (3) younger boys, twelve to fourteen. All are published in duplicate forms.

[13]Harper, Manley H., "A Test of Social Beliefs and Attitudes." Teachers College, Columbia University, New York.

accepted code of social relations, testing the ability to apply intelligence, vocabulary, judgment, and the like.[14]

7. "Personal Attitudes Test for Boys," revised by Lennig Sweet, is designed to discover the attitudes and ideals of boys toward various aspects of home and school life.[15]

8. "A Scale for Measuring Attitude Toward the Church," by L. L. Thurstone and E. J. Chave, is a scale covering forty-five opinions regarding the Church, which are used as indices of attitude.[16]

THE PROCEDURE OF THE STUDY

The Scope of the Problem

The definition of the problem of this study, as stated above, indicated three aspects or phases of faith in God for possible measurement. Each of these was used as the basis for a part or section of the test. A fourth section included a vocabulary test. The test, therefore, has four parts. The first part tests the pupil's vocabulary as related to faith in God; the second attempts to discover whether or not faith in God is effective in the conduct of the pupil; the third seeks to measure the pupil's attitude of trust or confidence in God; and the fourth deals with the content of the pupil's belief about God.

Sources of Data

The materials of the test were collected and revised upon data obtained from two sources. One source was the judgments of representative groups of competent leaders in the Church School and the high school fields. The other was the reactions of groups of pupils to the test in the different stages of its development. The relationship between these two sources of data will be indicated in the detailed discussion of the procedure followed in the development of the test.

The Construction of the Test

The construction of the four parts of the test involved the use

---

[14]Kohs, S. C., "Ethical Discrimination Test." C. H. Stoelting Company, Chicago, 1922.

[15]"Personal Attitudes Test for Boys." Revised by Lennig Sweet. Association Press, New York.

[16]Thurstone, L. L., and Chave, E. J., in "The Measurement of Attitude." University of Chicago Press, 1929.

of competent judges, the collection of test materials, the plans for establishing validity, and the precautions necessary. This step is discussed in Chapter II.

The Revision of the Test as a Result of Its Use

For this purpose the test was given to 566 Protestant Church School pupils and 192 high school pupils. At the same time the statements of trust in Part III were submitted to 120 judges for scaling. This preliminary use of the test and the revisions resulting from the data thus obtained are described in Chapter III.

The Use of the Revised Test

The revised test was then used with another sampling of Protestant Church School pupils, numbering 639, and with two other high school groups, totaling 294. The statements of trust in Part III, as revised, were submitted to 130 additional judges for scaling. Chapter IV reports the data obtained from this use of the revised test.

Validity, Reliability, and Norms

These data were used as the basis for establishing the validity and reliability of the revised test and for the setting of norms, as described in Chapter V.

The summary and conclusions drawn from the data are given in Chapter VI.

CHAPTER II

CONSTRUCTION OF THE TEST IN ITS PRELIMINARY STAGES

In its actual construction the test passed through the several stages indicated in the preceding chapter. The first of these was the preliminary collection and checking of the materials for the four parts of the test. This was preparatory to the preliminary use of the test, upon which careful checking and revision of all the materials would be based.

At this stage of development each part was blocked out and titled as follows:

Part I, "Moral and Religious Terms," contained the vocabulary test.

Part II, "General Questions," was the list of situations in which faith in God might be expected to be operative.

Part III, "How Much Do You Trust God?" gave the materials for building a scale of trust in God.

Part IV, "What Do You Believe About God?" was made up of the questions regarding belief about God.

The form of the different parts of the test was planned in such a way that the same method of recording pupil reactions could be used throughout the test. This was a simple check within a space provided for it. Little writing was required in the test, except in a few answers to questions on the supplementary data sheet. Only two questions in the remainder of the test required written answers.

In collecting and checking the materials of the preliminary form, help was given by four different groups of judges, all of whom were in active leadership of fifteen-, sixteen-, and seventeen-year-old boys and girls. For convenience in referring to these judges, they have been divided into groups, and each group is indicated by a letter. Additional judges were called in at times, and these will be noted as occasion arises.

Group A consisted of fourteen individuals, seven in the field of general education and seven in the field of religious education.

These were located in New York, Philadelphia, Chicago, Omaha, Los Angeles, San Francisco, and Boise, Idaho. Six of them belonged to the Presbyterian Church in the United States of America; two were Congregationalists; one was a member of the Presbyterian Church in the United States; one was an Episcopalian; one was an Evangelical; and three had no Church connections.

Group B was composed of eight religious educators, all of whom were Presbyterians, but with admittedly differing religious and educational points of view. They represented five states: Connecticut, Pennsylvania, Illinois, California, and Oregon.

Group C consisted of seven public school educators, one high school principal and six teachers, from four different Pennsylvania high schools. They included one Catholic, one Jew, one Quaker, and one avowed Atheist. The denominational affiliations of the other three were not known.

Group D included eleven graduate students in education whose denominational affiliations and state representations were not known.

COLLECTING THE MATERIALS

For the sake of clearness in describing the collection of materials, the order followed in this chapter is that of the preliminary form of the test. In the actual building of the test, Part I and the Supplementary Data Sheet were prepared after the other materials of the test had been collected and arranged. The preliminary form of the test as finally determined is given in the Appendix, pp. 94-102.

The first step in the collection of materials was to enlist the help of the members of Group A. To these the following letter and questions were sent:

"We are trying to find a way to discover how far the attitude of faith in God has been developed among high school students. We are therefore compiling a series of questions which will test belief in God and trust in him. Will you help us by giving your suggestions on the inclosed form? An early reply will be appreciated.

"1. Please give as many statements as you can showing trust and confidence in God, or lack of such trust, ranging all degrees, both negative and positive.

"2. Please give as many statements as you can which will give various 'beliefs' about God, covering a similarly wide range.

"3. Please give as long a list as possible of attitudes, feelings, acts, et cetera, which might result primarily from faith in God."

The questions were placed on a separate sheet with space for reply. All of the group answered, and their replies are used as the groundwork for the test. However, these answers went through various revisions, as described later in this chapter, before they reached the form in which they were used.

Part I—"Moral and Religious Terms"

This part of the test was prepared after the materials for the other three parts had been collected. There was a twofold purpose in collecting the materials. The first was the use of a vocabulary test to determine whether or not pupil difficulties in the remaining parts of the test were due to failure to understand the terms used. With this in mind, words were selected which had given difficulty to the pupils who helped in other parts of the test. A second purpose was to discover how far the vocabulary used in teaching about God was understood by the pupils. From this point of view, words were selected from the materials used to teach about God. These materials included lessons of the Protestant Episcopal Church,[1] lessons in the International Closely Graded Series, published by the Congregational Church,[2] Bible Study Union lessons in youth problems, published by Charles Scribner's Sons,[3] and lessons in the Westminster Departmental Graded Series, published by the Presbyterian Church in the U. S. A.[4]

---

[1]"The Creed and Christian Convictions." Course 13 of the Christian Nurture Series, Department of Religious Education, Protestant Episcopal Church, 1920.

[2]Brown, Arlo A., "Studies in Christian Living." Closely Graded Series. Pilgrim Press, Boston, 1913.

[3]Forbush, William Byron, "Young People's Problems as Interpreted by Jesus." Bible Study Union lessons. Completely Graded Series. Charles Scribner's Sons, New York, 1913.

[4]Love, Julian Price, "Thinking Christianity Through." Westminster Departmental Graded Materials. Presbyterian Board of Christian Education, Philadelphia, 1930.

The list of words collected from these two sources was revised by the judges of Group A and Group B, each indicating the words in the list which he considered most important from the point of view of the twofold purpose of the list. Upon the basis of this selection, the thirty words occurring in the list were chosen.

The form of this part of the test is similar to the vocabulary section of Kohs's "Ethical Discrimination Test."[5] The first item is given to indicate the form used:

"1. Infinite means human ( ) unlimited ( ) bad ( ) good' ( )." The directions at the beginning of this part contained an example indicating concretely what the requested reaction was to be. Since there were no synonyms for some of the words, the pupil was asked to check the word in the second group which meant the same or most nearly the same as the word at the beginning of the line.

Part II—"General Questions"

The purpose of this part of the test was to determine, if possible, whether the attitude of faith in God had any influence upon the conduct of the pupil in certain life situations. It was placed second in the test in order that the definite questions regarding faith in God used in the last two parts of the test might not influence the pupils in answering these general questions.

The material of this part of the test was secured from two sources. The judges of Groups A and B contributed lists of situations in which they believed faith in God might be a factor. The resulting list of situations was formulated in terms of questions. These questions were then given to a group of twenty-four high school boys and girls, who were asked to answer the questions and to indicate any other situations of high school life in which they felt faith in God might be evident. The high school boys and girls were from two groups, one a Sunday School class and the other a community Boy Scout troop. They were used merely to help in the preliminary collecting and checking of

[5]Kohs, S. C., "Ethical Discrimination Test." C. H. Stoelting Company, Chicago, 1922.

materials and might be considered as a group of pupil judges. As a result of the work of these high school boys and girls, this part of the test was prepared as it appeared in the preliminary form. The answers given by the high school group were used as the suggested replies to the questions. Where these answers did not seem adequate to three of the judges of Group B, additional items were included. The questions and answers were then checked by the judges of Group C.

Part III—"How Much Do You Trust God?"

The purpose of this part of the test was to determine the strength of the pupil's attitude of trust in God. The plan upon which it was constructed followed the technique suggested by Thurstone and Chave in their monograph, "The Measurement of Attitude."[6] The theory underlying this technique is that an attitude, which is subjective, finds its objective expression in a variety of ways. One of these expressions is an expression of opinion. The expressed opinion of an individual is taken as an index of attitude.

Some have suggested that what an individual does is a better indication of his attitude, since what he says may not be his true opinion. However, in the same way, what an individual does may not express his true attitude, for his conduct may be influenced by elements in the situation not related to his attitude. This difficulty is present in either case and tends to invalidate any instrument using either index. Thurstone and Chave contend that the expression of opinion is probably as valid an index of attitude as any that may be selected, but they point out this discrepancy.[7] There will also be some discrepancy in the index itself, but this is always the case when an index is used for any "truth."

The second principle in the technique followed by Thurstone and Chave is the building of an attitude scale, using a variety of opinions as the materials. These statements of opinion are arranged by a group of judges in terms of "more" or "less." If,

---

[6]Thurstone, L. L., and Chave, E. J., "The Measurement of Attitude."

[7]Ibid., p. 8.

for example, the scale is to measure the attitude toward the Church, which is the scale described by Thurstone and Chave, the statements used in the scale will be opinions about the Church. They will be arranged by judges on the basis of their being "more" or "less" favorable to the Church.

The procedure followed is described in detail by Thurstone and Chave in the monograph referred to, "The Measurement of Attitude." Dr. Thurstone, who is responsible for the technique, has described and defended it in several journals.[8]

The statements of this part of the test were collected from answers given by high school boys and girls in answer to the question, "How do you think of God?"; from an article in The Teachers' Journal and Abstract on "The Eternal Problem of Youth,"[9] reporting questionnaire studies with high school seniors and juniors; from an article in The Literary Digest, "Youth Creedless but Religious"[10]; and from the experiences of the judges of Group B in dealing with the religious problems of boys and girls. Some of the extreme statements, particularly statements of distrust, were added. This list, in its original form, totaled seventy-eight statements. Twenty-eight of these were dropped because they were ambiguous in form, because they were evidently not statements involving the attitude of trust, or because they were statements better included in the "What Do You Believe" part of the test. (Part IV.)

The fifty statements which remained were given to the two groups of high school boys and girls referred to above (p. 21) with the request that they check the statements they felt very strongly to be true, and that they indicate by a question mark those which they did not understand. Upon this basis, the statements were revised from the point of view of clearness. It was not possible, on the basis of the reactions of these pupils, to

---

[8]Thurstone, L. L., "A Mental Unit of Measurement." Psychological Review, Vol. XXIV (1927), pp. 415-423. "An Experimental Study of Nationality Preferences." Journal of General Psychology, Vol. I (1928), pp. 405-425.

[9]Risley, James H., "The Eternal Problem of Youth." The Teachers' Journal and Abstract, Vol. I, No. 9 (November, 1926), pp. 607-614.

[10]Joshi, S. L., "Youth Creedless but Religious." The Literary Digest, April 13, 1929, p. 31.

know whether or not the statements were inclusive in their range.

The list of statements thus revised was submitted to the judges of Group B with the request that they arrange the statements upon a scale ranging from complete distrust to complete trust. The scale was to have seven points, three of which were fixed—the two extremes and the middle or neutral point. A set of directions for scaling was also given them for criticism and suggestion. (Appendix, pp. 90, 91.) As a result of this preliminary scaling the fifty statements selected (see Appendix, pp. 98, 99) seemed to offer sufficient material for the building of a seven-point scale of trust in God, for which, in its final form, not more than twenty-four or twenty-five statements would be necessary.

The plan of procedure was to submit the scale to pupils and judges at the same time, using the results of both groups in determining the final selection of statements for the scale. This procedure will be described in detail in Chapter III, pp. 41-46, and Chapter IV, pp. 64-71.

The arrangement of the materials in this part differs considerably from the plans followed in Part I and Part IV. The reason for this arrangement was a desire to bring some variety into the form of the test. There was also the practical need for separating the statements upon slips which could be used in the judges' scaling. The arrangement of the statements in Part III made it possible to cut them apart easily and thus avoid the necessity for additional mimeograph stencils.

The directions to be followed were kept as simple as possible. The important sentence, "Check only those statements which you feel very strongly to be true," was underlined and then repeated at the top of each page given to this part of the test.

At the close of Part III the pupil was asked to scale himself upon the basis of his attitude of trust or distrust in God. A sample scale was given, followed by a scale for the use of the pupil. This plan was adopted to make possible the correlation of the pupil's reaction to the statements with his own self-scaling. It was expected that this would be some indication of the validity of Part III of the test.

Thurstone and Chave had used an eleven-point scale in measuring attitude toward the Church. A seven-point scale was planned here because the attitude of trust in God was much more specific and limited in range, making difficult the securing of sufficient statements of opinion for a larger scale.

Part IV—"What Do You Believe About God?"

The purpose of this part of the test was to discover the content of the pupil's conception of God. Part III indicated his attitude of trust or distrust in God, but gave no particular information regarding the kind of God in which he trusted. Part IV was planned to supplement Part III and to furnish the data necessary to discover the pupil's belief about God.

The materials for this part of the test were collected from the judges of Group A in the preliminary questions which were sent to them (see pp. 19, 20); from statements of high school boys and girls themselves in answer to the question, "How do you think of God?"; from the article, "The Eternal Problem of Youth," reported in The Teachers' Journal and Abstract[11]; and from the article in The Literary Digest, "Youth Creedless but Religious."[12] Suggestions were taken also from certain tests covering somewhat the same field as Part IV. These tests were: "A Test of Religious Ideas Involving the Ranking of Selected Answers,"[13] "Religious Beliefs,"[14] and "Religious Thinking Test, Advanced."[15]

The materials of Part IV were not intended to be exhaustive of all the possible conceptions of God. They include, however, the most important of these conceptions and give a general rather than a detailed picture of the pupil's belief. To insure that the list of statements, obtained as described above, were inclusive of the most important conceptions of God, it was checked by the judges of Groups B and C. For the same purpose the writings

[11] See footnote 9, p. 23.
[12] See footnote 10, p. 23.
[13] Chassell, Clara F. and Laura, "Multiple-Choice Test of Religious Ideas." Religious Education, Vol. XVII (February, 1922), pp. 55-60.
[14] "Religious Beliefs." Northwestern University Religious Education Tests. Evanston, Illinois, 1927. (Mimeographed.)
[15] "Religious Thinking Test, Advanced." Association Press, New York.

of certain recognized authorities in the field were consulted. These included: "The Philosophy of the Christian Religion," by Andrew Fairbairn[16]; "The Idea of God," by John Fiske[17]; "Creative Personality," by Ralph T. Flewelling[18]; "Religion the Dynamic of Education," edited by Walter M. Howlett[19]; "An Introduction to the Philosophy of Religion," by John Caird[20]; "Basic Ideas in Religion," by Richard W. Micou[21]; and "What Is Faith?" by John Gresham Machen.[22]

As a result of this checking, the list was revised. It was then given to the group of twenty-four high school boys and girls (see pp. 21, 22) to see whether or not the questions were understood by them. Upon the basis of their reactions, the questions were further revised and put into the form used in the preliminary test. The members of this group were also asked to add any other beliefs about God which they themselves held or which they thought other high school students held. This was another attempt to secure inclusiveness in the list.

In determining the form of the test the directions were kept simple and an opportunity for practice in checking was given. The form of checking was the same as in the preceding parts of the test.

The pupil was asked to check his belief on a five-point scale ranging from "No, very strongly" to "Yes, very strongly." This form follows the usual five-point scale plan (see "A Study of International Attitudes of High School Students,"[23] by Neumann), but the checking method of indicating pupil reaction is more simple than the plan calling for circling a letter or for indicating reaction by use of a letter.

---

[16]Fairbairn, Andrew, "The Philosophy of the Christian Religion," Chapter VIII.
[17]Fiske, John, "The Idea of God," p. 173.
[18]Flewelling, Ralph T., "Creative Personality," Chapter XXXI.
[19]Howlett, Walter M. (Editor), "Religion the Dynamic of Education," pp. 29-41; 45-60; 109-122.
[20]Caird, John, "An Introduction to the Philosophy of Religion," pp. 74-176.
[21]Micou, Richard W., "Basic Ideas in Religion," pp. 18-230.
[22]Machen, John Gresham, "What Is Faith?" Chapter II.
[23]Neumann, George B., "A Study of International Attitudes of High School Students." Columbia University, New York, 1926.

The statement of the items in question form was selected from several possibilities, because it was felt that the personal question, "Do you believe?" would be more apt to stimulate thinking on the part of the pupil than a simple declarative statement of belief or a simple question. This problem of form was discussed with members of the high school group referred to above, and they felt unanimously that the personal question adopted was the best from their point of view.

RELATIONSHIP BETWEEN THE PARTS

Special attention was given to the order in which the various parts of the tests should be arranged. Here the judges of Group B were consulted on the various possible arrangements which were placed before them. They finally determined that the part having to do with moral and religious terms should be first since quite probably it would be the least difficult and would be the most familiar in form to the pupils taking the test. They placed the general questions second, feeling that, as far as possible, these should be answered by the pupil before he had been impressed by the general purpose of the test itself. The moral and religious terms of Part I would not in themselves indicate the emphasis upon faith in God. This emphasis comes most strongly in the remaining parts of the test. Upon this basis, therefore, the judges agreed that "General Questions" should be Part II.

Either one of the remaining two parts of the test, the judges felt, could be placed third. In their opinion, however, the attitude section would be better in this position since it dealt more largely with the feelings, while the questions about belief in God had larger intellectual content. The judges agreed, without much conviction, however, that probably the pupil who had worked through the intellectual questions would be less responsive to the statements involving his feelings. Since there seemed to be no particular reason why the statements of trust should not precede the statements of belief, "How Much Do You Trust God?" was made Part III, and "What Do You Believe About God?" was made Part IV.

In the subsequent use of the test no data were secured which had any bearing upon the arrangement of the parts. None of

the leaders who used the test or who reviewed and criticized it raised the question of order. The test was always given in the prescribed order so that there are no data on pupil reactions to the parts of the test given in a difference sequence.

PLANS FOR ESTABLISHING VALIDITY

As the materials for the preliminary form of the test were collected and arranged, the question of validity was kept constantly in mind. Every effort was made to draw the materials in each of the parts of the test from the experience of high school pupils and to keep them representative of the actual situations, feelings, and beliefs of pupils of this group.

These efforts have been described in the preceding sections.

In Part II of the test the pupils were asked in the last question, "In what ways not included in the list above does your faith in God have a direct influence upon your thinking or your habits?" The purpose of this question was twofold: first of all, to determine how far the preceding list had been inclusive; and, second, to secure suggestions for supplementing and revising the list.

Furthermore, as the pupils took the test, they were asked to add answers to those given wherever they felt that the answers were inadequate. These were also to be used in the revision.

In Part III three definite plans were made for establishing the validity of the materials. At the close of Part III the pupil was asked to scale himself, and a sample scale was given. This has already been referred to on p. 24.

A second plan was to ask the pupils taking the test to secure ratings of themselves from their parents and teachers. Each pupil was given a mimeographed statement indicating what he was expected to do and why he was asked to do it. With this statement were two copies of a report form, one to be handed to the pupil's parents and the other to be handed to his teacher or some other adult who knew him very well.

These forms were to be filled in and returned directly to the Department of Research, in the addressed and stamped envelopes provided, without passing through the hands of the pupils. It was recognized that this plan had two major weaknesses. In the

first place, the adults selected might not be competent to judge the degree of trust of the pupil. This was guarded against by asking the pupil to select adults who knew him very well, and by requesting from the adult information regarding his knowledge of the pupil. The second danger was in the personal interest of the judges, which might lead to a biased judgment favoring the pupil. The directions to the adults attempted to help them to avoid such prejudice. Copies of the directions and the form are given in the Appendix, pp. 102, 103.

The third plan for establishing the validity of Part III was to ask the judges who scaled the statements in Part III also to give their opinion regarding the validity of each statement. Their judgment was to be expressed by the use of letters; A for "very reliable"; B for "reliable"; C for "doubtful"; and D for "not reliable." The directions used for this are given in the Appendix, pp. 90, 91.

The fourth method of establishing the validity of these materials will be described as a statistical procedure in connection with the determination of the scale for Part III (see pp. 46-48).

In Part IV of the test (Question 40), the pupil was asked, "Do you think that your answers to the preceding questions in this part of the test give a complete and true picture of your belief about God?" The purpose of this question was to discover whether or not the pupil himself felt satisfied with his checking of the preceding questions as indicating his true conception of God. For those who did not feel satisfied with the preceding questions, Question 41 was added, which gave them an opportunity to make additional statements of belief. These statements were to be used in the revision of the test.

PRECAUTIONS TAKEN

Certain precautions were necessary in the construction of the test to help in assuring its validity. In the first place, precautions were taken to keep the test from being influenced by the subjective judgment of any single individual. Whenever it was necessary to rely upon subjective judgment the consensus of opinion of competent judges was employed. As far as possible,

however, particularly in the tabulation and interpretation of pupil reactions to the test, objective techniques were used.

In the second place, precautions were taken to encourage serious and conscientious response to the test on the part of the pupils. In the preliminary use of the test the statement of the person administering it (see Chapter III, p. 31) was planned to encourage the pupils to do careful thinking. This motivating idea was incorporated in the opening paragraph of the revised test. (See Appendix, p. 103.) Further, the pupil was not asked to identify himself by signing his name. In addition to this, seriousness of response was encouraged by the directions at the beginning of each part of the test. The result of these precautions will be considered in Chapter V, pp. 77, 78.

CHAPTER III

REVISION OF THE TEST ON THE BASIS OF ITS USE

The material for the test, collected and partially refined as described in the preceding chapter, was prepared for general use as a basis for further refinement. In this form the material covered thirteen pages. Three supplementary sheets were added to be used in checking the validity of Part III. (See p. 28.) A thousand copies of this form were prepared for use during the spring and summer of 1929. (The content of the preliminary form is given in the Appendix, pp. 94-102.)

A brief set of directions was prepared for the guidance of those administering the test. These directions were as follows:

"The following material has been prepared in an effort to find a way to determine how far the attitude of faith in God has actually been developed in boys and girls. It is still in experimental form and we need very much your help in perfecting it. As you use the material, will you please do the following things:

"1. Make a statement to the group indicating that in using the materials they will not only help themselves in their own thinking but also help other boys and girls all over the country, asking them to be as honest and fair in their answers as they possibly can, both because of the importance of the material itself and because it is not a test on which they are to be graded.

"2. Call attention to the fact that it is not necessary for them to sign their names to the test (unless for some reason you as leader desire to identify the papers).

"3. Ask them to read carefully the directions before each part of the test and to follow these directions.

"4. Indicate to the group that all answers to the test will be considered in strict confidence.

"5. See that the tests when filled out are either mailed directly to the address below or are put into the hands of some one who is responsible for taking care of them."

PUPIL GROUPS

The groups selected for the preliminary testing were, for the most part, from Protestant Church Schools. Groups of this kind

were selected because they were a part of the population which would probably make the most use of the test in its final form and because of the availability of representative Protestant Church School groups in denominational and interdenominational summer camps and conferences. Two high school groups were also used, that their reactions might help in the refinement of the materials.

In each instance the final selection of the group was determined by the ability of the leader to administer the test material intelligently. All the leaders who gave the test in its preliminary form were familiar with the administration of educational tests, were interested in the development of tests in religious education, and, with the exception of the leaders in the two high schools, had been closely in touch with the preparation of the preliminary form of the test materials. All agreed to follow carefully the directions given and all reported that they had done so.

The Church School Group

The Church School pupils to whom the test was given were in the interdenominational summer camps directed by the Pennsylvania State Council of Religious Education, and in certain summer conferences in other states directed by the Presbyterian

TABLE I

REPRESENTATIVE CHARACTER OF CHURCH SCHOOL GROUP

Distribution of 566 Pupils, from Data Supplied by Pupils

Chronological Age				School Grade		Geographical Location		Denominational Affiliation	
Age	Boys	Girls	Total	Grade	No.	State	No.	Denom.	No.
15	50	142	192	9	26	1. Pennsylvania	346	1. Presbyterian	297
16	44	188	232	10	87	2. New Jersey	67	2. Methodist	90
17	27	115	142	11	196	3. New York	42	3. Lutheran	57
Total	121	445	566	12	198	4. Illinois	36	4. Reformed	37
				Graduated	38	5. West Virginia	32	5. Baptist	20
				Out of School	1	6. Kansas	22	6. Brethren	9
				Blank	20	7. Ohio	16	7. Moravian	5
				Total	566	8. Iowa	1	8. Episcopal	3
						Blank	4	9. Christian	3
						Total	566	10. Church of God	3
								11. Interdenom.	2
								None	1
								Blank	39
								Total	566

Board of Christian Education. The representative character of this group as a whole is indicated by Table I, on p. 32.

As might be expected the group was a select group in its relationship to the Church and the Church School. The character of the group from this point of view is indicated by Table II. In reading this table it must be remembered that the figures for years of attendance are the approximate estimates or guesses of the pupils themselves.

High School Group

The high schools in which the preliminary form of the test was used were both in Tennessee. One was situated in a small town and the other was a consolidated rural school. The age and grade distribution and the Church and Church School relationships of this group are shown in Table III.

A comparison of Table III with Tables I and II indicates a marked similarity between this high school group and the Church School group in respect to Church and Church School relation-

TABLE II

SELECT CHARACTER OF CHURCH SCHOOL GROUP

Relation to Church and Church School, from Data Supplied by Pupils

Church Membership		Church Attendance			Sunday School Attendance		
	No.	Custom	No.	Years No.	Custom	No.	Years No.
Members	526	Habitually	330	1– 5	Habitually	493	1–2
Nonmembers	1	Usually	152	2–16	Usually	64	2–0
Blank	39	Occasionally	73	3–35	Occasionally	6	3–1
Total	566	Seldom	5	4–37	Seldom	0	4–1
		Never	1	5–42	Never	0	5–7
		Blank	5	6–36	Blank	3	6–1
		Total	566	7–30	Total	566	7– 3
				8–40			8–14
				9–30			9– 8
				10–70			10–75
				11–33			11–46
				12–33			12–97
				13–27			13–75
				14–26			14–73
				15–27			15–61
				16–35			16–55
				17–15			17–29
				Blank–29			Blank–18
				Total 566			Total 566

ships. Practically all the members of the high school group are members of Church Schools and attend with more or less regularity. So close is the resemblance between the two groups that

TABLE III

CERTAIN CHARACTERISTICS OF 192 HIGH SCHOOL BOYS AND GIRLS

School Grade

Grade	No.
9	16
10	76
11	72
12	28
Total	192

Sunday School Attendance

	No.
Habitually	124
Usually	42
Occasionally	22
Seldom	3
Never	1
Blank	0
Total	192

Church Attendance

	No.
Habitually	87
Usually	62
Occasionally	28
Seldom	13
Never	1
Blank	1
Total	192

Denominational Affiliation

Denom.	No.
Baptist	57
Methodist	59
Presbyterian	31
Congregational	3
United Brethren	4
Lutheran	1
Christian	2
Church of God	1
Blank	34
Total	192

Chronological Age

Age	Boys	Girls	Total
15	18	33	51
16	37	46	83
17	23	35	58
Total	78	114	192

this high school group does not constitute a separate population but is nothing more than a sampling of the same population as that represented by the Church School group taken in a different situation and under different conditions. From this point of view, however, the reactions of the group are a worth-while check against those of the Church School group.

THE GROUP OF JUDGES FOR SCALING PART III

In the different groups that used the preliminary form of the test should be included the judges who scaled the statements of trust in Part III of the test, following the technique described in Chapter II (pp. 22-25). These judges were selected upon the basis of three criteria: (1) some knowledge of the high school age group since the reactions of this group were being considered;

(2) wide geographical distribution as an aid to variety in point of view; (3) representation of varying religious points of view.

The first two criteria presented little difficulty in application. Relationship to members of the high school group either as parents or as leaders in public school or Church School was taken as satisfying the first criterion. The second criterion meant the selection of judges from different sections of the country. The third criterion, however, presented more difficulties. Difference in denominational relationship was taken as one indication of possible difference in religious point of view. On the other hand, however, similarity in denominational membership is not necessarily indicative of similarity in religious point of view, particularly in these days of fundamentalist, conservative, liberal, and modernist groups within many denominations.

In the determination of criteria as a basis for the selection of judges, it must be noted that Thurstone and Chave do not feel the need for any criteria.[1] They maintain that, since the judges are not asked to express their own opinions but rather to rate the opinions of others, this rating will be done similarly by judges who may differ widely in their own opinions. The character of the group of judges used in scaling the statements in Part III of the preliminary form of the test is given in Table IV.

TABLE IV

REPRESENTATIVE CHARACTER OF 120 JUDGES SCALING ITEMS IN PART III

Type of Leadership		Denominational Affiliation		Geographical Distribution	
Church School	62	Presbyterian, U. S. A.	55	Pennsylvania	60
High School	37	Presbyterian, U. S.	10	New Jersey	13
Parent	11	Methodist	8	California	10
Unknown	10	Methodist, South	5	North Carolina	10
Total	120	Reformed	5	Oregon	10
		Lutheran	4	Connecticut	4
		Evangelical	1	Idaho	4
		Friend	1	Massachusetts	4
		None	8	Illinois	3
		Unknown	23	Nebraska	2
		Total	120	Total	120

[1] Thurstone, L. L., and Chave, E. J., "The Measurement of Attitude," p. 30.

RESULTS OF PRELIMINARY USE

As has been indicated, the purpose of the preliminary use of the test was to discover the points at which the test needed revision. In the following description of the results of using the preliminary form, special attention will be given to the weaknesses discovered and the revisions suggested.

Several points of weakness were evident in the supplementary data sheet. The item, "Name of your city or town," was difficult to tabulate. Some simple plan was needed for indicating the approximate size of the town. This was added in the revision.

A second difficulty appeared in the question, "What school grade are you now in?" Since these tests were taken during the summer the question was answered in two ways, either by the school grade of the preceding year or by the school grade which would be entered the following year. This question needed more careful guarding by some such phrase as, "If test is taken during summer months, state grade last attended."

In asking for the number of years the pupil had attended church, the request for the number before entering high school and the number since entering high school was frequently disregarded and was not actually necessary since much the same information is asked for in the following question, "Did you attend church during the following age periods?" after which four age periods are given. In answer to the question, "Of what denomination are you a member?" some found it necessary to write in a denominational preference. This indicated the need for a second question, "If you are not a member of any Church, what is your denominational preference?"

Not many pupils gave name and address, since that information was indicated as being unnecessary. It was felt, therefore, that request for name and address should be removed from the supplementary data sheet. The pupil was told that this information was not necessary and yet before he had finished the page there was a place asking for both his name and his address. (If included at all, this request might better come at the close of the test.)

In addition to these revisions there was a lack of information upon two points. The first of these was the place where the test was taken, and the second, the nationality of the pupil's parents. Many leaders who reviewed the test felt that the nationality of parents was an important item.

These suggested revisions were made in the supplementary data sheet. It seemed wise also to carry a simple paragraph which would explain briefly the purpose of the test and motivate the pupil taking it. Several leaders suggested changing the title of the test itself as desirable from the point of view of pupil attitude. The title upon the preliminary form was therefore changed from "Faith in God Among High School Students" to "Religious Discovery Test for High School Use." The judges of Group B agreed that this was a much more desirable title and that it would probably help to encourage a favorable attitude on the part of the pupils taking the test.

Part I—"Moral and Religious Terms"

Pupil performance on Part I is shown in Table V. This table gives the per cent of pupils checking correctly each of the thirty words, and compares the Church School and the high school groups. A study of this table will indicate that the Church School group, without exception, checked more nearly correctly than did the high school group. The words which caused the greatest difficulty to both groups were: belief (26), optimism (23), hate (16), and pessimism (12).

Two points of weakness emerged in this part of the test as a result of its use. In the first place, the twofold purpose of the test caused real difficulty in the selection of the words. This was discovered by checking the words on the mimeographed form of the test by the judges of Group C and by three classes of graduate students in religious education, who considered and criticized the test. It also appeared in some of the questions which were asked by the pupils themselves after the test had been taken. It seemed advisable, as a result of these criticisms, to revise Part I by changing its purpose. The single purpose which was adopted was to discover whether or not the difficulties which pupils had in

using the test were the result of failure to understand the terms. With this purpose as a criterion, words were selected from the test itself, in its revised form, which had actually given difficulty to the pupils who had taken the test. These difficulties were dis-

TABLE V

PER CENT OF PUPILS CHECKING PART I CORRECTLY

Item	Church School	High School
1. Infinite	81	70
2. A being	98	92
3. Reality	88	70
4. Faith	99	96
5. Trust	96	78
6. Confidence	89	79
7. Individual	99	93
8. Distrust	84	47
9. Fear	89	70
10. Spirit	84	69
11. Law	83	64
12. Pessimism	73	44
13. Creator	98	83
14. Love	92	94
15. Right	98	91
16. Hate	70	38
17. Power	99	91
18. Wrong	99	93
19. Justice	97	83
20. Virtue	86	76
21. Honesty	92	63
22. Force	92	78
23. Optimism	69	44
24. Kindness	87	75
25. Impersonal	93	83
26. Belief	63	44
27. Ruler	83	71
28. Wisdom	83	67
29. Holiness	84	63
30. Eternal	86	67

covered by the way in which pupils checked the other parts of the test. The words selected were limited to Part IV, since Parts II and III presented no verbal difficulties to the pupils. In its revised form, therefore, Part I consisted of words which had caused difficulty to pupils checking Part IV.

The second weakness was the presence of the word "means" in each list. The directions had asked that the pupil check the word in the second group which "means" the same or most nearly

the same as the word at the beginning of the line. The use of "means" with each group of words caused some pupils to forget the second possibility in the directions; and as a result they did not check any word, feeling that there was no exact synonym for the first word in the line. This difficulty was overcome in the revised form of the test by dropping out the word "means" and substituting a dash in its place.

The scoring plan which was adopted for Part I was to allow one point for each correct answer. This is the scoring plan used in a similar type of test which is part of Kohs's "Ethical Discrimination Test."[2] Because of the unsatisfactory character of the list of words resulting from the twofold purpose, upon which it was selected, this part of the test was not scored. The scoring plan was tried out, however, on a random sampling of the pupils. There was but little correlation between Part I and the other parts of the test. The correlation between Part I and Part II was .07.

Part II—"General Questions"

The results of the preliminary use of Part II showed that this part of the test was very unsatisfactory in its form. The situations were collected and stated in question form for discovering important data about the pupil which would help in interpreting his attitude toward and conception of God. The tentative plan which was set up for scoring Part II involved the selection of certain of the items for scoring purposes and the consideration of other items as informational only. When the results of the pupil reactions were assembled, however, it was discovered that the value of the informational items was not sufficient to warrant their use as a part of the test. Furthermore, it was felt that no materials should be included as a part of the test which were not really used for purposes of testing.

These facts made necessary a complete revision of the content and form of Part II. Certain of the questions were retained in the revised form and others were added. The new

[2]Kohs, S. C., "Ethical Discrimination Test." C. H. Stoelting Company, Chicago, 1922.

list was constructed on the basis of the original materials used in assembling the general questions, and upon the basis of further study made by those attempting to discover the problems of the high school age group. The chief of these studies was made by Dr. Norman E. Richardson, who collected some five thousand high school problems. This study has not been published.[3] The questions in the revised form of Part II were checked against the results of this study, and they were selected because they seemed to be the most common situations among high school pupils which might involve faith in God.

The list in its revised form was transmitted to the judges of Group A and Group B and was also presented to three classes of graduate students in religious education. No change was made in the content of the questions as a result of their judgments, but the wording of some was revised. The revised list was not subjected to trial by pupil reactions, because it had its source directly in pupil experience and because any necessary revision could be made upon the basis of the second use of the test.

Table VI indicates the way in which Church School and high school groups checked the items in Part II which had been selected for scoring. In this table, column one, "Score Item," gives the number of the question and the letter of the answer to be scored; column two gives the per cent of Church School pupils checking that answer; column three, the per cent of high school

TABLE VI

PER CENT OF PUPILS CHECKING SCORE ITEMS IN PART II

Score Item	Church School	High School
3(d)	31	31
4(i)	71	61
8(a, b, c)	95	94
9(Aa, b, c)	99	95
10(Yes, c or e)	61	38
12(d)	72	54
13(Ba, b)	97	89
14(f)	81	70
15(Ca, b)	83	64

[3]The data collected by Professor Norman E. Richardson, of the Presbyterian Theological Seminary, Chicago, was consulted in his library, where it is on file.

pupils checking it. Because of the complete revision of this part of the test, no more data on pupil reactions are given.

Part III—"How Much Do You Trust God?"

The description of the use of Part III must include not only performance of the pupils to whom the test was given, but also the results of the work of the judges who were asked to scale the items in this part. General reference has been made to the technique used in building the attitude scale. (See Chapter II, pp. 22, 25.) The plan as followed in connection with the material in this part was to ask a group of 120 judges to rate the statements, both as to reliability and as to scale value. The directions to the judges are given in the Appendix, pp. 90, 91. A copy of Part III as used in the test, together with the statements upon separate slips, was sent with these directions.

Two hundred judges were asked to help in this part of the work. Results were received from 152. Of these, 32 had evidently misunderstood the directions, in some cases failing to write on the slips the scale point at which they had placed them. It was necessary, therefore, to discredit the results which came in from these 32. Several of the judges did not respond in any way to the request; others, however, replied that they were not able to comply. They raised three objections to the procedure.

Certain of the judges said that it was impossible for them to scale the items as requested. They had tried but could not follow the directions, not because of any lack of clarity in the directions, but because they found it impossible to determine where on the scale the statements belonged. In each case these judges reported that they had spent a great deal of time in discussing with themselves the meaning of each statement. This experience bears out the remark of Professor Thurstone, made in a personal conversation, to the effect that he had found that judges who were specialists in the field covered by the materials of the scale had great difficulty in scaling statements since each statement called up in their thinking so many related facts and difficulties that the simple act of scaling proved impossible.

A second objection raised by the judges was regarding the

procedure itself. Most of those who responded that they were unable to follow directions, and many who did follow directions, maintained that the procedure was too subjective to have any value. One judge in particular scaled the statements at three different times and reported that his three scalings had differed so widely that he could see no possibility of a group of judges reaching any agreement. It is true that the process of scaling is subjective, but the same objection may be raised against the judgments used in Thorndike's handwriting scale, although in this case the material judged was objective. The best answer to the objections is the actual results of the scaling by the judges. This is shown in Table VIII. Here it is evident that the judges did agree on many of the items.

A third objection raised by some was that the scale would be a scale of opinions and not a scale of attitudes. Reference has been made to this objection in the description of the technique (p. 22). It was expected to be a scale of opinions, but these were to be indices of attitudes. The directions given the judges indicate this. They were asked to place the statement on the scale where they thought the person who held the opinion would belong. They were asked, therefore, to scale, not the opinions, but the persons who held the opinions. How far they actually followed this direction it is impossible to estimate. The results of the use of the scale will help to answer this.

Pupil performance is shown by Table VII. This table gives the average number of pupils in Church School and high school, divided into fifteen-, sixteen-, and seventeen-year-old groups. The final column in the table gives the average of the total of both Church School and high school groups. The material in this table will be used later in different form in Table IX.

During the same period in which the high school pupils were taking the test in its preliminary form, the judges described above (p. 34) were scaling the items. The result of their scaling is given in Table VIII. This table shows the items of Part III ranked in order on the basis of the average rating of the 120 judges. These judges were grouped cumulatively into five groups. The results of the first 30 were taken; then 20 more

TABLE VII

PER CENT OF PUPILS CHECKING STATEMENTS IN PART III

Comparison of Church School Group and High School Group

Age 15 Item	191 Tests Church School	51 Tests High School	Age 16 Item	230 Tests Church School	80 Tests High School	Age 17 Item	142 Tests Church School	31 Tests High School	Average 725 Tests
1	32	38	1	35	27	1	35	28	32.5
2	81	83	2	82	68	2	75	68	76.2
3	64	49	3	63	58	3	63	33	55.0
4	41	21	4	41	28	4	29	21	31.1
5	63	68	5	59	56	5	69	55	61.7
6	34	15	6	36	20	6	39	28	28.7
7	1	7	7	2	3	7	5	2	3.3
8	77	57	8	76	72	8	76	51	68.2
9	6	3	9	7	5	9	2	0	3.8
10	88	77	10	87	83	10	93	77	84.2
11	88	84	11	84	87	11	93	67	83.8
12	3	4	12	4	4	12	0	2	2.8
13	29	49	13	23	44	13	20	36	33.5
14	68	58	14	71	59	14	75	40	61.8
15	70	51	15	63	51	15	69	38	57.0
16	4	11	16	4	8	16	4	0	5.2
17	87	83	17	90	80	17	72	70	80.3
18	0	0	18	1	0	18	0	0	.16
19	58	56	19	63	64	19	68	51	60.0
20	4	7	20	4	10	20	2	5	5.3
21	45	28	21	38	34	21	33	29	34.5
22	2	0	22	0	0	22	0	0	.33
23	1	0	23	1	0	23	0	0	.33
24	2	6	24	6	3	24	3	2	3.7
25	2	3	25	3	0	25	1	0	1.5
26	84	67	26	77	78	26	78	61	74.2
27	4	3	27	3	0	27	1	2	2.2
28	5	0	28	4	3	28	2	2	2.7
29	39	30	29	38	38	29	42	12	33.2
30	85	81	30	76	74	30	87	58	76.8
31	85	61	31	88	75	31	89	70	78.0
32	1	0	32	3	0	32	1	0	.83
33	1	2	33	1	1	33	0	2	1.2
34	3	2	34	1	2	34	2	5	2.5
35	90	88	35	88	82	35	90	56	82.3
36	0	3	36	1	0	36	6	0	1.7
37	8	14	37	4	6	37	2	5	6.5
38	10	11	38	8	10	38	8	12	9.8
39	87	79	39	83	89	39	85	75	83.0
40	0	0	40	0	0	40	0	0	0
41	4	0	41	3	3	41	5	0	2.5
42	1	0	42	0	0	42	0	0	.16
43	87	65	43	86	79	43	93	61	78.5
44	3	4	44	1	2	44	4	0	2.3
45	68	32	45	59	62	45	64	40	54.2
46	4	0	46	1	2	46	0	0	1.2
47	0	0	47	0	0	47	0	0	0
48	0	0	48	0	0	48	0	0	0
49	42	28	49	48	30	49	43	14	34.2
50	6	2	50	2	2	50	4	0	2.3

TABLE VIII

AVERAGE SCALE RATING OF 120 JUDGES GROUPED CUMULATIVELY

(Items Ranged in Order of Rating)

I. Items Scaled from 0 to 1.

Rank	Item		1-30	1-50	1-70	1-90	1-120	Rank	Item		1-30	1-50	1-70	1-90	1-120
1.	36	M	.2	.2	.3	.2	.3	5.	28	M	1.1	1.0	.9	.9	.7
		SD	.5	.38	.54	.54	.58			SD	1.1	1.3	1.2	1.2	1.1
		V					58%			V					54%
2.	40	M	.6	.6	.5	.4	.4	6.	27	M	.8	.7	.8	.8	.9
		SD	1.1	1.2	1.1	1.0	1.0			SD	1.0	1.0	1.0	1.1	1.2
		V					55%			V					62%
3.	41	M	.7	.6	.6	.6	.7	7.	23	M	.8	.7	.9	.9	.9
		SD	.9	.9	.9	.86	.9			SD	.97	.86	.94	1.0	1.0
		V					48%			V					45%
4.	47	M	.9	.7	.7	.7	.7	8.	22	M	1.1	.9	.9	.9	.9
		SD	1.1	1.0	1.0	1.0	1.0			SD	1.1	1.0	.97	1.0	1.0
		V					66%			V					53%

II. Items Scaled from 1 to 2.

Rank	Item		1 -30	1-50	1-70	1-90	1-120	Rank	Item		1-30	1-50	1-70	1-90	1-120
9.	7	M	.9	.8	1.0	1.0	1.0	13.	48	M	1.2	1.1	1.2	1.2	1.2
		SD	.99	1.06	.66	.63	.63			SD	1.2	1.1	1.1	1.0	.98
		V					59%			V					62%
10.	18	M	1.1	1.1	1.0	1.1	1.1	14.	42	M	1.3	1.4	1.4	1.4	1.4
		SD	1.3	.97	1.1	1.1	1.0			SD	.98	1.1	1.1	1.1	1.1
		V					69%			V					47%
11.	25	M	1.0	1.1	1.1	1.2	1.1	15.	12	M	1.9	1.7	1.7	1.7	1.7
		SD	1.2	1.3	1.2	1.3	1.2			SD	1.1	1.3	1.1	1.1	1.1
		V					79%			V					69%
12.	33	M	1.0	1.1	1.1	1.2	1.1	16.	34	M	1.9	1.9	1.9	2.0	1.9
		SD	1.1	1.2	1.2	1.4	1.4			SD	1.5	1.4	1.3	1.3	1.2
		V					63%			V					25%

III. Items Scaled from 2 to 3.

Rank	Item		1-30	1-50	1-70	1-90	1-120	Rank	Item		1-30	1-50	1-70	1-90	1-120
17.	9	M	1.9	1.9	1.9	1.9	2.0	23.	32	M	2.3	2.3	2.2	2.2	2.2
		SD	1.2	1.3	1.2	1.2	1.3			SD	.85	1.2	1.2	1.4	1.4
		V					73%			V					49%
18.	44	M	2.0	1.8	2.0	2.0	2.0	24.	38	M	2.1	2.1	2.2	2.3	2.4
		SD	1.4	1.3	1.3	1.3	1.3			SD	1.2	1.2	1.1	1.2	1.1
		V					52%			V					53%
19.	24	M	1.8	1.9	2.0	2.0	2.1	25.	49	M	2.2	2.4	2.3	2.3	2.5
		SD	1.2	1.2	1.2	1.2	1.2			SD	1.5	1.7	1.6	1.6	1.7
		V					37%			V					49%
20.	16	M	1.9	1.8	2.0	2.1	2.1	26.	50	M	2.9	2.7	2.8	2.8	2.8
		SD	1.5	1.5	2.0	1.4	1.5			SD	1.2	1.2	1.6	1.7	1.6
		V					58%			V					72%
21.	37	M	1.9	1.9	2.0	2.1	2.2	27.	20	M	3.0	2.7	2.8	2.8	2.8
		SD	1.2	1.2	1.2	1.2	1.2			SD	1.1	1.1	1.0	1.0	1.0
		V					56%			V					60%
22.	46	M	1.9	2.1	2.2	2.1	2.2	28.	13	M	2.9	2.6	2.6	2.8	2.9
		SD	1.3	1.24	1.2	1.7	1.7			SD	1.3	1.5	1.5	1.5	1.6
		V					31%			V					61%

IV. Items Scaled from 3 to 4.

Rank	Item		1-30	1-50	1-70	1-90	1-120	Rank	Item		1-30	1-50	1-70	1-90	1-120
29.	39	M	3.3	3.4	3.4	3.4	3.5	30.	1	M	3.6	3.6	3.6	3.5	3.6
		SD	.6	.78	.74	.81	.86			SD	1.1	1.09	1.08	1.06	1.02
		V					64%			V					79%

V. Items Scaled from 4 to 5.

Rank	Item		1-30	1-50	1-70	1-90	1-120	Rank	Item		1-30	1-50	1-70	1-90	1-120
31.	43	M	4.7	4.8	4.7	4.8	4.7	32.	14	M	5.1	4.9	4.8	5.0	4.9
		SD	.99	1.0	.95	.88	.95			SD	1.0	1.3	1.3	1.2	1.3
		V					81%			V					71%

VI. Items Scaled from 5 to 6.

Rank	Item		1-30	1-50	1-70	1-90	1-120	Rank	Item		1-30	1-50	1-70	1-90	1-120
33.	31	M	5.0	5.0	4.9	5.0	5.0	42.	3	M	5.4	5.3	5.3	5.3	5.4
		SD	.91	.96	.96	.95	.95			SD	.83	.83	.83	.98	.95
		V					80%			V					87%
34.	8	M	5.0	5.0	5.0	5.0	5.1	43.	35	M	4.7	4.8	4.7	4.8	4.7
		SD	.98	1.02	.96	1.0	1.0			SD	.99	1.0	.95	.88	.95
		V					78%			V					81%
35.	21	M	5.1	5.1	5.0	4.9	5.1	44.	19	M	5.6	5.5	5.5	5.5	5.5
		SD	.87	.87	.84	.94	.98			SD	.67	.76	.76	.76	.76
		V					52%			V					70%
36.	17	M	5.2	5.2	5.1	5.0	5.1	45.	26	M	5.7	5.3	5.5	5.6	5.6
		SD	.75	.76	.73	.85	.89			SD	.53	.65	.63	.67	.7
		V					85%			V					91%
37.	45	M	5.2	5.2	5.2	5.2	5.1	46.	29	M	5.5	5.6	5.6	5.6	5.6
		SD	.79	.78	.73	.77	.82			SD	1.0	.85	.78	.82	.85
		V					89%			V					57%
38.	2	M	5.2	5.3	5.2	5.1	5.1	47.	6	M	5.7	5.6	5.6	5.6	5.6
		SD	.99	.89	.89	.94	.9			SD	.83	.83	.77	.73	.72
		V					79%			V					62%
39.	15	M	5.3	5.2	5.2	5.1	5.1	48.	11	M	5.8	5.8	5.7	5.6	5.6
		SD	.83	.84	.79	.84	.8			SD	.38	.52	.55	.62	.65
		V					85%			V					88%
40.	30	M	5.3	5.3	5.3	5.2	5.2	49.	10	M	5.8	5.7	5.7	5.7	5.7
		SD	.73	.73	.74	.82	.85			SD	.46	.63	.59	.62	.62
		V					91%			V					83%
41.	4	M	5.4	5.3	5.2	5.2	5.2	50.	5	M	5.8	5.8	5.7	5.7	5.7
		SD	.94	1.02	1.0	1.1	1.1			SD	1.09	.79	.82	.89	.89
		V					66%			V					79%

were added and the results of the 50 were tabulated; 20 more were added to these and the results again tabulated; 20 more; then a final 30 completed the group. The purpose of this grouping was to determine whether or not the sampling of judges was sufficient. The plan is suggested by Rugg in his "Primer of Graphics and Statistics for Teachers."[4] The rule he gives is, "Keep adding more cases until the average of the variability of successive samplings remains practically constant, then you have a 'random' sampling." Table VIII, then, indicates the mean scale position assigned to each item by the 120 judges in five cumulative groups. It also gives the standard deviation for each group. A third item, called V in the table, represents the judges'

[4]Rugg, Harold, "A Primer of Graphics and Statistics for Teachers," p. 62.

opinion regarding the validity of each statement. The percentage indicates the number of judges who held that the statement was "very reliable" or "reliable"; that is, who rated it A or B. (See Chapter II, p. 29.)

In determining the scale value to be assigned to each statement there were two possible methods of computation. Thurstone and Chave,[5] in constructing their scale of attitude toward the Church, used the median of the judges' ratings upon the principle that the scale value of a statement should be that point upon the scale above which there were 50 per cent of the judges and below which there were 50 per cent. This plan would not seem to take into account the distance away from the point of the judges. For example, a group of 120 judges might place statement 46 at 2.2 upon the scale. This being the median point, 50 per cent of the judges did place the statement below this point and 50 per cent of them above it. This measure would not be influenced by the relative position of the judges upon the scale. Some of the judges could be moved from 3.0 to 5.0 without changing the statement's median position. Because of the fact that the median does not weight the scaling of the judges, it was decided to use the mean, which does consider the scale value of each judgment. This is the plan followed by Thorndike in his handwriting scale.[6] It is the basis used here in determining the scale value of each of the statements. Table VIII, therefore, gives the mean position upon the scale assigned to each statement by 120 judges.

A Measure of Validity

As Thurstone and Chave[7] point out, the amount of variability in the rating by the judges is an indication of the ambiguity

---

[5]Thurstone, L. L., and Chave, E. J., "The Measurement of Attitude."

[6]Thorndike, Edward L., "Handwriting." Teachers College Record, Vol. XI, pp. 86, 87. Columbia University, New York.

"If thirty or forty individuals chosen from competent judges of handwriting thus judged a thousand samples [that is, by ranking them three or four times], the average of all their gradings gives approximately the relative merit of each sample in the judgment of competent judges in general."

[7]Thurstone, L. L., and Chave, E. J., "The Measurement of Attitude," pp. 44, 55.

of the statement. If the statement is ambiguous it becomes difficult to scale and the judges disagree. Thus the larger the measure of variability the greater the ambiguity of the statement. Thurstone and Chave use Q as the measure of variability. In Table VIII the standard deviation has been used. This repre-

TABLE IX

STATEMENTS RANKED ON BASIS OF JUDGES' SCALING, SHOWING PER CENT OF PUPILS CHECKING STATEMENTS

I. Items Scaled by Judges from 0 to 1.

Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group	Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group
1.	36	2.3	1.0	1.7	5.	28	3.7	1.6	2.7
2.	40	0	0	0	6.	27	2.7	1.7	2.2
3.	41	4.0	1.0	2.5	7.	23	.67	0	.33
4.	47	0	0	0	8.	22	.67	0	.33

II. Items Scaled from 1 to 2.

Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group	Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group
9.	7	2.7	4.0	3.3	13.	48	0	0	0
10.	18	.33	0	.16	14.	42	.33	0	.16
11.	25	2.0	1.0	1.5	15.	12	2.3	3.3	2.8
12.	33	.67	1.7	1.2	16.	34	2.0	3.0	2.5

III. Items Scaled from 2 to 3.

Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group	Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group
17.	9	5.0	2.7	3.8	23.	32	1.7	0	.83
18.	44	2.7	2.0	2.3	24.	38	4.4	11.0	9.8
19.	24	3.7	3.7	3.7	25.	49	44.0	24.0	34.2
20.	16	4.0	6.3	5.2	26.	50	4.0	1.3	2.3
21.	37	4.7	8.3	6.5	27.	20	3.3	7.3	5.3
22.	46	1.7	.67	1.2	28.	13	24.0	43.0	33.5

IV. Items Scaled from 3 to 4.

Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group	Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group
29.	39	83.0	81.0	83.0	30.	1	34.0	31.0	32.5

V. Items Scaled from 4 to 5.

Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group	Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group
31.	43	88.7	68.3	78.5	32.	14	71.3	52.3	61.8

VI. Items Scaled from 5 to 6.

Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group	Rank	Item	Total Ch. S.	Total H. S.	Total Entire Group
33.	31	87.3	68.7	78.0	42.	3	60.0	46.7	55.0
34.	8	76.3	60.0	68.2	43.	35	89.3	75.3	82.3
35.	21	38.7	30.3	34.5	44.	19	63.0	57.0	60.0
36.	17	83.0	77.7	80.3	45.	26	79.7	68.7	74.2
37.	45	63.7	44.7	54.2	46.	29	39.7	26.7	33.2
38.	2	79.3	73.0	76.2	47.	6	36.3	21.0	28.7
39.	15	67.3	46.7	57.0	48.	11	88.3	79.3	83.8
40.	30	82.7	71.0	76.8	49.	10	89.3	79.0	84.2
41.	4	37.0	23.3	31.1	50.	5	63.7	59.7	61.7

sents a greater per cent of judges than does Q and should, therefore, be a more reliable measure of ambiguity.

With these measures in mind, the data in Table VIII become significant. The items in the first group represent those scaled by the judges from 0 to 1. Item 36 is the first in the list. This item was given a mean scale value of .2 by three groups and of .3 by two groups. The standard deviation ranged from .5 to .58. It was considered by 58 per cent of the judges to be a valid statement. In the same way the table may be interpreted for the other items.

As Table VIII is studied it becomes evident that there was a weak spot in the scale. This occurred near the middle in the neutral section. There are only two items scaled from 3 to 4 and only two from 4 to 5. This was a serious situation which had not been foreseen. The items had been scaled by several groups of individuals before they were submitted to the judges, and there seemed to be at least six items for each section of the scale. When the scaling was more carefully done, however, the scale as a whole broke in the middle. There were not sufficient items to fill out the central portion of the scale. This deficiency in the scale made it useless to carry through any careful computation of pupil reactions. (See p. 49 and Chapter IV, pp. 64-71.) However, a comparison of pupil reactions with the scaling by the judges is interesting. This is shown in Table IX. Here the items are ranked as in Table VIII and the per cent of pupils checking is given in three groups, the per cent of Church School pupils, of high school pupils, and of the combined groups. The table is significant because it indicates that the pupils were checking much as the judges thought they would. There are one or two exceptions, notably item 49, which ranks twenty-fifth, which was checked by 44 per cent of the Church School group, as compared with 4 per cent for the items before and after; items 29 and 6, ranking respectively forty-sixth and forty-seventh, which were checked by 39 per cent and 36 per cent of the Church School group, while the items immediately preceding and following were checked by 79 per cent and 88 per cent. On the whole, however, there is close agreement, since both Church

School and high school groups represent a population closely related to the Church.

In the plans for checking the validity of this part of the test, mention was made of the effort to have pupils rated by parents and others (see p. 28). Of these blanks, 126 were returned, giving ratings of the pupils. Apparently they had been filled out with care by the individuals who returned them. They represented ratings on 84 pupils. Only one criticism of the plan was contained in the group. One individual replied that she did not think it right to judge regarding the faith in God of any individual. With four exceptions, the total number of replies rated each individual at the highest possible point on the scale. Because of this uniformity, the material was considered valueless and no further tabulation of the results was attempted.

Steps Toward Revision

This review of the results of Part III in its preliminary form indicated the need for one important revision: The gap in the scale had to be filled. Ten statements were prepared which seemed to range in that region of the scale where the greatest weakness had appeared. These statements were submitted to the judges of Group B for preliminary scaling. The results of this preliminary scaling indicated that the statements belonged in the weak sections of the scale. These ten statements were added to the group already constituting Part III of the test. From the fifty original statements, however, ten were dropped. The criteria used for dropping the statements were: (1) variation in the mean value assigned by the judges; (2) high value for standard deviation; (3) low value for "V." The statements omitted were as follows: 13, 16, 25, 28, 33, 34, 44, 46, 49, 50.

No change was made in the form of any of the statements. The order, however, was rearranged through an error in recopying the list. The revised list in the new order appears in the Appendix, pp. 108, 109.

PART IV—"WHAT DO YOU BELIEVE ABOUT GOD?"

The per cent of pupils checking each item in Part IV is given

TABLE X

PER CENT OF PUPILS CHECKING EACH ITEM IN PART IV

Item		Very Strongly No	No	Uncertain	Yes	Very Strongly Yes
1. Do you believe that God is everywhere, knows everything, and can do all things?	Ch. S.	1	1	3	30	64
	H. S.	0	0	2	21	71
2. Do you believe that God is not a person, but is an impersonal force that operates in accord with the laws of nature?	Ch. S.	26	16	23	17	8
	H. S.	25	18	18	8	4
3. Do you believe that God is a loving Father?	Ch. S.	0	0	1	24	74
	H. S.	0	1	3	24	63
4. Do you believe that God is working with us to make the world better?	Ch. S.	1	1	3	30	65
	H. S.	0	1	8	31	50
5. Do you believe that God is but another name given for the laws of nature?	Ch. S.	45	34	11	4	1
	H. S.	41	34	6	3	0
6. Do you believe that God will set aside the laws of nature, such as those governing rain, in order to please you or your group?	Ch. S.	49	40	6	2	1
	H. S.	38	34	9	3	2
7. Do you believe that God is merely the most wonderful man that ever lived?	Ch. S.	34	29	9	11	12
	H. S.	21	22	5	18	18
8. Do you believe that God provides food, clothing, shelter, and for all your daily needs?	Ch. S.	5	7	10	40	36
	H. S.	4	6	10	35	37
9. Do you believe that it is impossible to know anything at all about God?	Ch. S.	45	39	6	3	3
	H. S.	36	28	7	6	3
10. Do you believe that God is so kind that he will not punish anyone?	Ch. S.	41	44	10	2	1
	H. S.	37	40	6	1	2
11. Do you believe that God is merely a beautiful thought to help us to live better?	Ch. S.	46	36	12	3	2
	H. S.	40	31	10	1	2
12. Do you believe that God is interested in you as an individual?	Ch. S.	2	2	6	39	50
	H. S.	2	2	11	29	45
13. Do you believe that God eventually rewards all those who do right and punishes all those who do wrong?	Ch. S.	4	7	16	33	39
	H. S.	2	7	9	32	38
14. Do you believe that God is a being who looks like a man but is greater and nobler?	Ch. S.	15	20	24	24	12
	H. S.	9	18	24	24	12
15. Do you believe that God is unkind because he allows pain and suffering?	Ch. S.	49	43	4	1	1
	H. S.	41	36	4	2	0

Item		Very Strongly No	No	Uncertain	Yes	Very Strongly Yes
16. Do you believe that God is far off, outside the world, and that therefore you cannot reach him?	Ch. S.	53	35	5	2	1
	H. S.	42	35	8	1	0
17. Do you believe that God is merely an idea that has grown up out of man's imagination to help him to explain things which he does not understand?	Ch. S.	58	31	5	2	0
	H. S.	49	30	6	0	1
18. Do you believe that God is the Creator and Ruler of the world?	Ch. S.	2	1	3	23	70
	H. S.	0	2	3	21	64
19. Do you believe that there is no God of any kind?	Ch. S.	79	16	1	0	1
	H. S.	61	21	2	1	3
20. Do you believe that God has complete and absolute power over everything?	Ch. S.	2	4	7	30	56
	H. S.	1	2	8	24	56
21. Do you believe that God has power to keep you from doing what is wrong?	Ch. S.	6	17	26	25	20
	H. S.	3	7	19	28	24
22. Do you believe that God is unjust because he allows grafters to become rich?	Ch. S.	34	43	14	3	1
	H. S.	32	42	11	2	0
23. Do you believe that God helps only those who are trying to help themselves?	Ch. S.	13	24	16	37	13
	H. S.	7	19	11	30	17
24. Do you believe in one God who is God the Father, God the Son, and God the Holy Spirit?	Ch. S.	1	3	6	29	60
	H. S.	0	1	6	26	58
25. Do you believe that God holds you responsible for everything you do?	Ch. S.	5	16	21	33	22
	H. S.	3	5	15	31	35
26. Do you believe that God is a person whom everyone can trust?	Ch. S.	1	2	3	31	54
	H. S.	1	1	5	27	54
27. Do you believe that God can be reached with equal ease by every individual and in every place?	Ch. S.	7	17	13	31	31
	H. S.	3	11	12	21	32
28. Do you believe that God is always ready and anxious to have fellowship with individuals?	Ch. S.	1	1	5	39	54
	H. S.	4	3	14	25	39
29. Do you believe that God is an infinite Spirit, wise, loving, just, and powerful?	Ch. S.	0	2	6	34	55
	H. S.	2	1	9	27	35
30. Do you believe that God has nothing at all to do with your life?	Ch. S.	67	24	2	1	3
	H. S.	49	27	3	4	3

Item		Very Strongly No	No	Uncertain	Yes	Very Strongly Yes
31. Do you believe that God is the friend of everyone who has faith in him?	Ch. S.	8	1	3	35	59
	H. S.	1	1	5	38	49
32. Do you believe that God is the inspirer of great art and literature?	Ch. S.	2	5	18	39	34
	H. S.	4	9	19	23	16
33. Do you believe that everything is God and God is the only reality?	Ch. S.	4	8	38	18	18
	H. S.	5	13	27	10	10
34. Do you believe that God really revealed himself to us through Jesus Christ?	Ch. S.	0	2	7	34	57
	H. S.	1	2	13	33	33
35. Do you believe that God really reveals himself to us through nature?	Ch. S.	1	2	9	45	42
	H. S.	2	6	22	27	19
36. Do you believe that God is one being and there is but one such being?	Ch. S.	4	5	16	27	41
	H. S.	3	2	17	20	23
37. Do you believe that through faith you can have an experience of God quite as real in its way as your experience with an earthly friend?	Ch. S.	1	3	17	39	35
	H. S.	0	2	18	28	22
38. Do you believe that God is still at work in the world?	Ch. S.	0	1	3	35	58
	H. S.	0	1	6	36	44
39. Do you believe that God is the Father only of certain individuals or groups and that he is not the Father of all mankind?	Ch. S.	65	28	3	2	1
	H. S.	45	30	2	2	1
40. Do you think that your answers to the preceding questions in this part of the test give a complete and true picture of your belief about God?	Ch. S.	1	3	9	51	33
	H. S.	1	1	13	43	24

in Table X. This table indicates the difference between the checking by the Church School group and by the high school group. A study of this table shows very little real difference between the two groups. The percentages run much the same for each of the questions.

Question 40 in the list asks the pupil to indicate how well his checking represented his true conception of God. A total of 84 per cent of the Church School group and 67 per cent of the high school group checked this question in the affirmative. Many

who did not added statements. In the process of revising Part IV those statements were considered. In addition, Part IV was checked again against certain other materials. Some of these materials were statements of theory and philosophy; namely: Hocking's "Meaning of God in Human Experience"[8]; and two articles, one by Widgery, "Introduction to a Modern Philosophy of Religion," in The Monist,[9] and the other by Johnston on "Theosophy," in the Theosophical Quarterly.[10]

The second type of materials used in the checking were study materials prepared for boys and girls of these age groups. They were: "Studies in Christian Living," by Arlo Brown[11]; "Young People's Problems as Interpreted by Jesus," by Forbush[12]; and "The Creed and Christian Convictions," a course prepared by the Department of Religious Education of the Protestant Episcopal Church.[13] These comparisons suggested the addition of certain questions in order to make Part IV more inclusive. It became necessary, therefore, to drop out some of the questions in the preliminary form in order that Part IV might not become too long. The questions omitted were omitted either because they had been covered in previous parts of the test, or because they were similar to other questions in Part IV itself. In omitting questions effort was made to balance the possible negative responses and the possible positive responses. This balancing was done upon the basis of pupil response to the questions in Part IV, balancing against one another the total negative and total positive responses. The questions omitted were as follows: 8, 13, 14, 21, 26, and 32. The following questions were added (The

---

[8]Hocking, W. E., "The Meaning of God in Human Experience." Part IV, "How Men Know God."

[9]Widgery, Alban G., "Introduction to a Modern Philosophy of Religion." The Monist, Vol. XXXIX, No. 3 (July, 1929), pp. 418-439.

[10]Johnston, Charles, "Theosophy." Theosophical Quarterly, Vol. XXVII, No. 1 (July, 1929), pp. 12-14.

[11]Brown, Arlo A., "Studies in Christian Living," pp. 24-73; 183-189; 266-286. Closely Graded Series. Pilgrim Press, Boston, 1913.

[12]Forbush, William Byron, "Young People's Problems as Interpreted by Jesus," Chapter I (end), series of questions regarding belief in God. Charles Scribner's Sons, New York, 1913.

[13]"The Creed and Christian Convictions." Christian Nurture Series of the Protestant Episcopal Church. Morehouse Publishing Company, Milwaukee, 1920.

number before each refers to the position in the revised form of the test):

25. Do you believe that the world is filled with many spirits which have a real influence upon our living?

15. Do you believe that the world is governed by many gods, each with his own special responsibilities?

8. Do you believe that God is impersonal substance, existing in and through but above and beyond our universe?

9. Do you believe that God is the impersonal moral law of the universe, the principle of justice at the heart of everything?

11. Do you believe that God is a name for the impersonal spiritual laws of the universe, which are alive and which operate themselves?

In one or two instances it was evident from the pupils' responses that the questions were not understood. The statements were therefore revised slightly. Number 1, which contained three items, was separated into three different questions. Questions in this part were also rearranged, effort being made to avoid uniformity in checking. The revised form for Part IV appears in the Appendix, pp. 111, 112.

In revising the statement of the questions which were retained, the points of difficulty discovered by the pupils were listed. These were as follows: question 1, three queries; question 4, one query; question 6, one; question 7, two queries; question 10, one query; question 15, one; question 16, one; question 23, one; question 24, one; question 25, one; question 33, three queries; question 36, two.

SOME TENTATIVE CORRELATIONS

As has already been indicated in discussing the use of the test, certain parts of it proved so inadequate that any attempt to discover correlation would be valueless. However, a sampling was taken of fifty pupils from the various ages of the Church School group by selecting every tenth pupil. These were scored for each part and the correlation between the scores was figured, using the product-moment formula. The correlations were as follows:

Part I	with Part II	.07
Part I	with Part III.....	.38

Part I	with Part IV	.35
Part II	with Part III	.52
Part II	with Part IV	.51
Part III	with Part IV	.63
Part III	Supplementary Scale with Score	.21

CHAPTER IV

PUPIL REACTIONS TO THE REVISED TEST

The test, revised as described in the preceding chapter, was printed for use during the spring and summer of 1930. Effort was made to secure a wider and more representative use of the test than had been true of the material in its preliminary form. An especial attempt was made to have it used in high schools. Certain difficulties were encountered which made this impossible. Five high school groups found it impossible to use the test because of its religious character. Two of these were in Philadelphia, one in Pittsburgh, one in New Jersey, and one in Ohio. Other high schools in New York, Chicago, St. Louis, and North Dakota had planned to use the test but found that regular testing programs crowded it out. The result was that the use of the test for high school groups was limited to two high schools, one in a suburb of Philadelphia and one in a city of Oklahoma. A total of 294 high school pupils, fifteen, sixteen, and seventeen years of age, used the test in these two schools. This small group could not be considered representative of the high school population. It did serve as a valuable check, as will be evident in the following discussion.

Greater interest was shown by the Church School leaders who were approached. Four denominations offered to use the test and to tabulate the results themselves, but they did not find it possible to do this within the time limits of the study. Other denominational and local leaders did use the test, however, so that the 639 Church School pupils, fifteen, sixteen, and seventeen years of age, were more representative than the group of Church School pupils taking the test in its preliminary form.

After the tests were returned, the data were tabulated upon master charts, using only the number of the questions in each part. In this form the data were used in preparing tables and charts and in doing the statistical work involved in standardizing the test. This insured an objective handling of the data by all involved in the work of tabulation. Only after the charts and

tables had been prepared was the content of the questions noted.

CHARACTER OF THE PUPIL GROUPS

The accompanying tables and charts indicate the character of the pupil groups using the test. Table XI shows the representative character of the Church School group. Nineteen denominations and eighteen states were represented in the group

TABLE XI

REPRESENTATIVE CHARACTER OF CHURCH SCHOOL GROUP

Chronological Age

Age	Boys	Girls	Total
15	60	121	181
16	70	209	279
17	40	139	179
Total	170	469	639

School Grade

Below 9	3
9	35
10	203
11	267
12	92
Above 12	17
Blank	22
Total	639

Denominational Affiliation

1. Presbyterian	334
2. Congregational	57
3. Episcopal	53
4. Methodist	52
5. Lutheran	43
6. Reformed	37
7. Baptist	18
8. Moravian	10
9. Brethren	5
10. United Brethren	5
11. Schwenkfelder	3
12. Seventh Day Baptist	2
13. Evangelical	2
14. Quaker	2
15. Catholic	1
16. Methodist Protestant	1
17. Christian	1
18. United Presbyterian	1
19. C. E.	1
Blank	11
Total	639*

*21 of these are Church preferences.

Type of School

Public	605
Private	9
Parochial	0
Blank	25
Total	639

Geographical Representation

1. Pennsylvania	238
2. New Jersey	102
3. New York	86
4. Ohio	35
5. Michigan	26
6. Kansas	24
7. California	23
8. Florida	21
9. Iowa	21
10. Illinois	19
11. Connecticut	17
12. Indiana	10
13. District of Columbia	7
14. South Dakota	3
15. Delaware	2
16. Massachusetts	1
17. New Hampshire	1
18. Wisconsin	1
Blank	2
Total	639

Size of Town	No.
Large City	82
Small City	178
Suburb	34
Town	297
Country	35
Blank	13
Total	639

membership. The representation from some of these was small. Practically all of the group were from public schools, representing a grade range from pupils of the ninth grade to high school graduates.

Table XII indicates the representative character of the racial elements in the group. This table gives the parentage of the pupils, the greater number of whom were of American parents.

As was true in the Church School group using the test in its preliminary form, this group was closely related to the Church and Church School. Table XIII indicates the large number habitually attending Sunday School and church. Practically all of the group were Church members as well as church attendants. The facts in these tables are based upon the supplementary data supplied by the pupils themselves.

Table XIV indicates the character of the high school group. This group covered the same chronological ages and school grades.

TABLE XII

NATIONALITY OF PARENTS—CHURCH SCHOOL GROUP

1. American	482	22. Norwegian and German	1
2. Austrian and American	1	23. Swiss and German	1
3. Canadian and American	1	24. Welsh and German	1
4. Dutch and American	1	25. Swedish and German	1
5. English and American	5	26. Dutch	6
6. German and American	1	27. Swedish and Dutch	1
7. Irish and American	1	28. Irish and Dutch	1
8. Swedish and American	1	29. Welsh and Dutch	1
9. English	30	30. Irish	1
10. Irish and English	3	31. Swedish and Irish	2
11. Dutch and English	2	32. Scottish and Irish	9
12. Italian and English	1	33. Belgian	1
13. Scottish and English	9	34. Canadian	1
14. German and English	7	35. Italian	2
15. French	2	36. Roumanian	1
16. German and French	2	37. Scottish	11
17. Spanish and French	1	38. Swedish	7
18. Belgian and French	2	39. Welsh and Swedish	1
19. German	12	40. Portuguese	1
20. Armenian and German	1	Blank	20
21. Irish and German	4	Total	639

TABLE XIII

SELECT CHARACTER OF CHURCH SCHOOL GROUP

Sunday School Attendance

Custom	
Habitually	527
Usually	13
Occasionally	2
Seldom	6
Never	3
Blank	88
Total	639

Years	
2	2
3	1
4	9
5	5
6	5
7	7
8	10
9	19
10	85
11	33
12	111
13	88
14	109
15	56
16	33
17	7
Blank	59
Total	639

Church Attendance

Custom	
Habitually	269
Usually	146
Occasionally	99
Seldom	16
Never	1
Blank	108
Total	639

Age Period

1–5	6–10	11–15	16–20
94	243	411	62

Church Membership

Members	607
Preferences	21
Nonmembers	0
Blank	11
Total	639

The range of school grade did not include, however, any graduates of high school. This is natural since the test was given within the high school itself. Although including the same number, the list of denominations represented differs somewhat from that of the Church School group. It will be noticed that the Methodists predominate and that certain of the smaller denominational groups are represented. This group was not so closely related to the Sunday School. Practically all of the group were either Church members or expressed Church preferences. They did not attend church or Sunday School so regularly as did the Church School group.

A comparison of the number of pupils in each group of the three chronological ages is given in Chart 1. This chart shows that the average age of the high school group was somewhat older than that of the Church School group. The Church School group represents a normal distribution of ages, 44 per cent being sixteen and 28 per cent being fifteen and seventeen, respectively.

TABLE XIV

CHARACTER OF HIGH SCHOOL GROUP

Chronological Age

Age	Boys	Girls	Total
15	27	33	60
16	68	78	146
17	38	50	88
Total	133	161	294

School Grade

Grade	No.
9	4
10	110
11	142
12	33
Blank	5
Total	294

Denominational Affiliation

Denomination	No.
1. Methodist	80
2. Presbyterian	73
3. Baptist	34
4. Christian	32
5. Catholic	16
6. Friends	7
7. Christian Science	7
8. Episcopal	6
9. Jewish	4
10. Church of God	3
11. Lutheran	2
12. Pentecostal	2
13. Full Gospel	2
14. Holiness	1
15. United Brethren	1
16. Spiritualist	1
17. True Church	1
18. International Bible Students' Association	1
19. Any Protestant	1
Blank	20
Total	294*

*32 of these are Church preferences.

Church Attendance

Custom	No.
Habitually	65
Usually	67
Occasionally	97
Seldom	43
Never	9
Blank	13
Total	294

Sunday School Attendance

Custom	No.	Years No.
Habitually	107	2– 4
Usually	82	3– 6
Occasionally	56	4– 4
Seldom	23	5– 8
Never	18	6–10
Blank	8	7–10
Total	294	8–14
		9– 6
		10–31
		11–10
		12–33
		13–12
		14–40
		15–26
		16–29
		17– 4
		Blank–47
		Total 294

Chart 2 shows that there is very little difference between the two groups so far as school grade is concerned. The high school group represents a more nearly normal distribution than does the

Chart 1

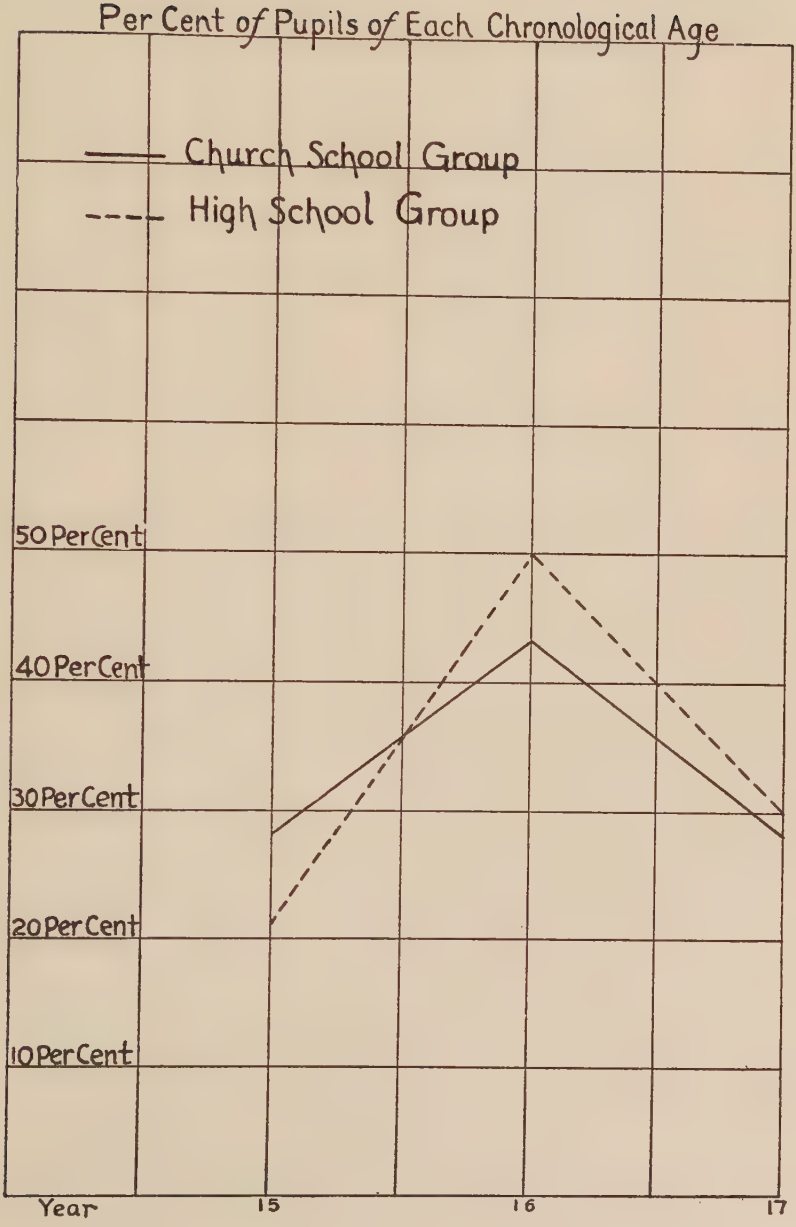
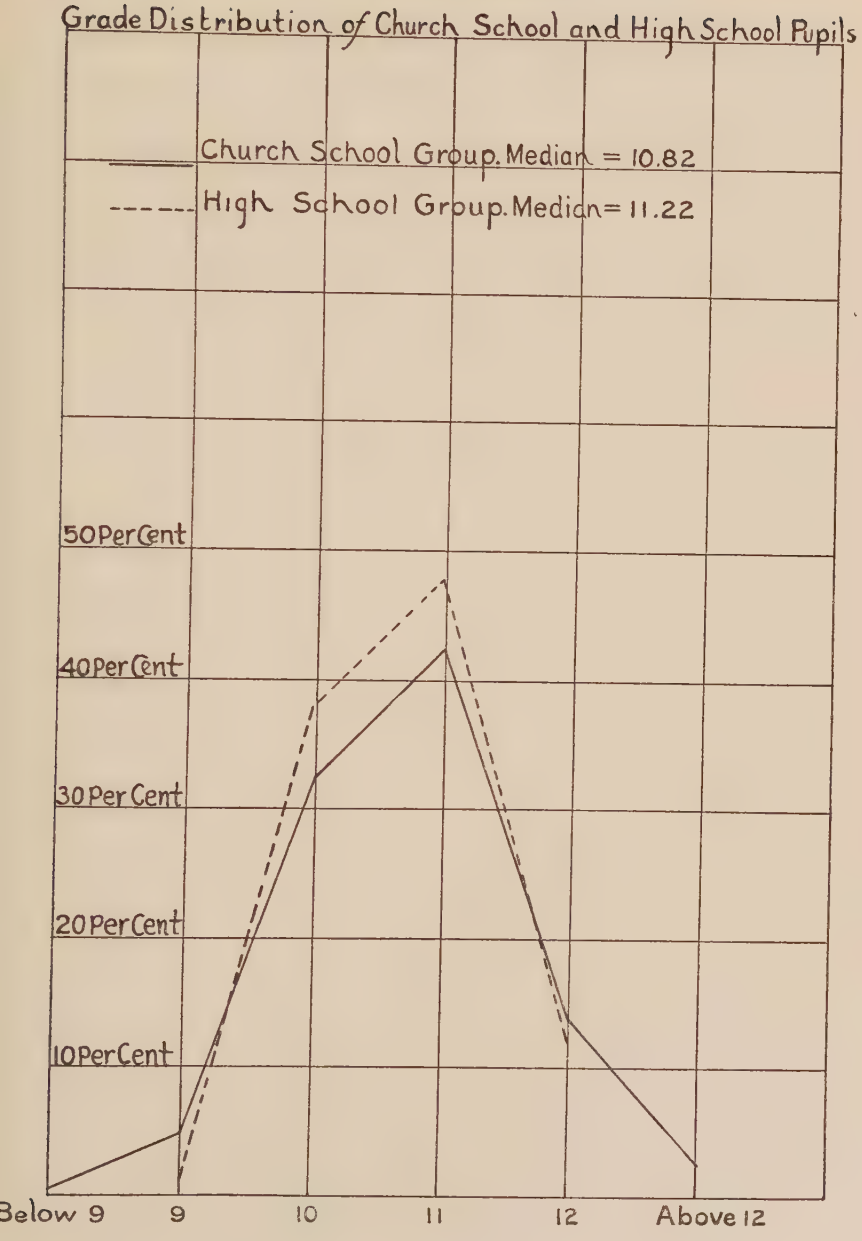

Per Cent of Pupils of Each Chronological Age
Church School Group
High School Group
50 Per Cent
40 Per Cent
30 Per Cent
20 Per Cent
10 Per Cent
Year
15
16
17

Chart 2


Grade Distribution of Church School and High School Pupils
Church School Group. Median = 10.82
High School Group. Median = 11.22
50 Per Cent
40 Per Cent
30 Per Cent
20 Per Cent
10 Per Cent
Below 9
9
10
11
12
Above 12

Church School group, and tends to be lower in grade. This is to be expected since the members of the latter group are, on the average, younger than the high school pupils. From the general character of the groups educationally, the high school group should perform better than the Church School group. From the religious point of view, however, the Church School group should do better than the high school group. This situation, therefore, is different from that which obtained in the first use of the test. There the high school group was very nearly like the Protestant Church School group in the characteristics described above. (See Chapter III, pp. 32-34.)

PUPIL REACTIONS TO EACH PART OF THE TEST

Part I—"What Do These Words Mean?"

In revising the materials for Part I of the test, the title was changed and a question form was used. This was done because it was felt that the question would arrest the attention of the group more than would the mere title used in the preliminary form. Twenty-eight words were used as a basis for this test. In preparing the copy, however, two numbers were skipped, number 21 and number 28, so that the test seems to contain thirty words. This was an error in printing, which will be corrected when the test is reprinted.

In determining the correct meaning of the words in the list, the authority used was Webster's "New International Dictionary," edition of 1928. In selecting the various meanings of the word given by the dictionary, that meaning was taken which best fitted the word as used in Part IV of the test. In no case was this meaning unusual.

In scoring the test, the same plan was followed as in the preliminary form. Each correct response was scored 1, so that the total possible score for Part I of the test was 28.

Table XV indicates the per cent of Church School and high school pupils checking correctly the words in the test. From the high percentages which generally prevailed, it seems that the words used caused little difficulty. Percentages under 75 have

TABLE XV

PER CENT OF PUPILS CHECKING PART I CORRECTLY

Item	Church School	High School
1. Infinite	75	72
2. A being	95	96
3. Reality	87	81
4. Faith	95	97
5. Trust	81	83
6. Confidence	50	85
7. Individual	67	98
8. Distrust	91	89
9. Spirit	84	79
10. Law	91	89
11. Creator	95	97
12. Love	96	97
13. Right	92	94
14. Power	91	92
15. Wrong	62	91
16. Justice	91	96
17. Force	92	95
18. Impersonal	89	91
19. Ruler	82	82
20. Wisdom	76	66
22. Principle	70	80
23. Spiritual	67	70
24. Universe	86	90
25. Absolute	91	94
26. Fellowship	86	84
27. Reveal	84	92
29. Believe	79	98
30. Substance	91	93

been underscored in the table. With one exception these are different for each group. The difficult words, apparently, for the Church School group are: "confidence," "individual," "wrong," "principle," and "spiritual." For the high school group the difficult words are: "infinite," "wisdom," and "spiritual." It will be noted also that the high school group was generally more nearly correct than was the Church School group.

The generally high percentage made by both groups upon this test suggests that the words are not sufficiently difficult for a verbal test. Part I serves its purpose, however, in indicating that any difficulty these pupils may have with Part IV of the test will probably not be due to failure to understand the words used.

Part II—"What Helps in Your Decisions?"

Material in Part II represents a complete revision of the corresponding material in the preliminary form of the test. In this revision the title was also changed, a question being substituted for the head "General Questions." The directions for scoring contained a sample of the type of response expected. The directions also attempted to confine the responses to actualities. The pupil was asked to think of his own situation. If he did not face the kind of situation described in the question, he was asked to cross off the question and go on to the next.

In planning a scoring system for this part of the test, a single score item was included among the answers to each question. This item was placed differently in each group in order to discourage a mechanical response on the part of the pupil. This scoring system was approved by the judges of Group B, who felt that each

Table XVI

PER CENT OF PUPILS CHECKING SCORE ITEMS IN PART II

Item		Very Much	Somewhat	Not at All
1.	Ch. S.	55	17	2
	H. S.	60	28	7
2.	Ch. S.	47	34	5
	H. S.	47	31	10
3.	Ch. S.	79	14	2
	H. S.	60	32	5
4.	Ch. S.	75	19	1
	H. S.	55	32	4
5.	Ch. S.	63	25	3
	H. S.	44	40	7
6.	Ch. S.	59	35	2
	H. S.	38	48	8
7.	Ch. S.	49	40	2
	H. S.	34	47	12
8.	Ch. S.	71	21	3
	H. S.	41	46	9
9.	Ch. S.	58	31	5
	H. S.	43	42	9
10.	Ch. S.	74	19	2
	H. S.	56	36	4
11.	Ch. S.	38	11	6
	H. S.	27	55	12
12.	Ch. S.	43	27	4
	H. S.	40	43	16

item selected for scoring actually represented a faith-in-God response.

Table XVI represents the way in which Church School and high school pupils marked the items selected for scoring. It will be noted that the Church School group scored more than the high school group.

TABLE XVII

NUMBER OF PUPILS CROSSING OUT ITEMS IN PART II

Item	Ch. S.	H. S.
1.	6	0
2.	49	23
3.	12	2
4.	6	17
5.	23	9
6.	7	7
7.	17	7
8.	14	7
9.	17	5
10.	16	5
11.	30	15
12.	18	8

The number of questions left blank by each group is shown in Table XVII. The comparatively large number of these seems to indicate that the pupils attempted at least to be honest in their responses. They did not tend to check mechanically the items in this part of the test.

In determining upon a scoring scheme for this part, it did not seem fair to penalize the pupils for crossing out questions in compliance with the directions, as would be true if the total raw score were used. Therefore a table was constructed for transmuting the raw score into a per-cent score, taking into account the number of questions crossed out. This table is given in the Appendix, p. 91.

PART III—"HOW MUCH DO YOU TRUST GOD?"

Response to the material of Part III was obtained not only from the Church School and high school pupil groups but also from a group of judges. This part had been revised somewhat from its form in the preliminary use of the test, and ten new state-

ments had been added. The judges who were asked to scale the statements in the revised form were 130 in number. Their character is indicated by Table XVIII. Thirty-eight of these judges had scored the statements in the preliminary form. From six months to a year had elapsed, however, before they were asked to rescale the statements, and it seems fair to assume that their

TABLE XVIII

CHARACTER OF 130 JUDGES SCALING ITEMS IN PART III

Type of Leadership	No.	Denominational Affiliation	No.	Geographical Distribution	No.
Church School	71	Presbyterian, U. S. A.	48	Pennsylvania	43
Public School	53	Lutheran	30	Massachusetts	9
Parent	2	Methodist	11	North Carolina	9
Unknown	4	Congregational	8	California	6
Total	130	Presbyterian, U. S.	3	Ohio	6
		Methodist, South	3	Illinois	5
		Episcopal	2	New York	5
		Baptist	2	Oregon	5
		Friend	2	Minnesota	4
		Non-Church	11	Indiana	3
		Unknown	10	Michigan	3
		Total	130	Connecticut	3
				Alabama	2
				Idaho	2
				Missouri	2
				Oklahoma	2
				Texas	2
				Colorado	2
				Nebraska	1
				New Jersey	1
				Wisconsin	1
				Unknown	14
				Total	130

former scaling would not influence their scaling of the material on this occasion. This group of judges was kept separate in order that its responses might be compared with the responses of the other judges.

The per cent of pupils checking various items in Part III is given in Table XIX. It will be noted that there is considerable correspondence between the Church School and high school groups on many of the questions. The material in this table will be rearranged in Table XXI upon the basis of the scale value given to each statement by the judges.

TABLE XIX

PER CENT OF PUPILS CHECKING ITEMS IN PART III

Item	Per Cent Ch.	S. H. S.
1. Sometimes I feel that God really helps me, but at other times he seems to have entirely forgotten me	55	59
2. God gives me real help to meet the moral problems of my life	69	57
3. I feel sure of God's power and love and have come to have complete faith in him	63	53
4. I feel that God does not have any real power over the life of an individual	4	8
5. I feel that if God really loves us he would use his power to put sin and suffering out of the world	8	14
6. I am sure that God is ready to receive me if I will give myself to him	85	69
7. My confidence in God has come from my own experience and is a strong influence in my life	53	43
8. God's will for me is the primary guiding influence in my life	43	35
9. Complete confidence in God helps us to make the most of ourselves	83	75
10. I am sure that God hears my prayers and answers them in the way that is best for me	86	72
11. God is my heavenly Father, who is interested in me and is always ready to help me	86	71
12. I rely upon God for help in making great decisions	66	42
13. I am sure that God takes care of each one who loves him	84	72
14. I am willing to do whatever God wants me to do	56	47
15. I depend upon God to supply my daily needs	35	26
16. I distrust God because he is always watching to catch me doing something wrong	2	1
17. I feel sure that God usually does not pay any attention to my prayers	2	4
18. I feel that I can always depend upon God, for God is the unchanging law of nature	92	65
19. I cannot trust God, for he is too far away from the world to be interested in human needs	1	1
20. I am uncertain about trusting God, for I am not sure that I am really one of his children	6	8
21. I feel that now I can never trust God, for he has not given me a fair chance in life	1	0
22. God hates people who do wrong	3	7
23. My knowledge of science has made it impossible for me to trust in God	3	5
24. God, living in me, makes it possible for me to do anything	40	32
25. God is worthy of my highest respect and confidence	38	78
26. Although God does not always do what I want, I feel that he always does what is best for me	42	75
27. God is such a stern judge that I am frightened when I think of dying	7	13
28. I feel that faith in God will not do anyone any harm	88	83
29. I feel sure that God has a plan for my life and that he will help me to find out what it is	79	59
30. When I do wrong I feel that God is sorry, but that he still loves me	80	63

Item	Per Cent Ch.	Per Cent S. H. S.
31. Trust in God is all right for the weak and ignorant but is not necessary for those who are strong	2	2
32. God has seemed so often powerless and unfair that I distrust him completely	1	0
33. God always seems to be on the side of the strong and powerful	5	6
34. I have no faith at all in God	1	1
35. I feel that a man cannot be honest in his thinking and still put any trust in God	6	3
36. I feel that God is worthy of the respect and confidence of all my friends	90	77
37. I feel unable to attack my major problems without God's help	67	53
38. Trusting in God is foolish, since everything happens by chance or in accord with natural law, neither of which can be changed by anyone	1	2
39. My experience with people who are religious makes me feel that trusting God is bad for people	2	1
40. I feel that God has very little power over the forces of nature and that he does not really care for mankind	1	1
41. God loves me, but cannot do much to help me because of the unchanging laws of nature	3	4
42. Trusting in God is all right for those who are not strong enough to help themselves	3	4
43. God usually helps me when I need him, but sometimes he does not	23	23
44. God could help me if he really loved me	9	14
45. God feels happy when I work hard and do what is right	81	65
46. I cannot see how trusting in God makes any difference either one way or another	3	5
47. I feel that God probably would help me if I had enough confidence in him	49	46
48. God takes care of me by seeing that I have food, clothing, and shelter	55	44
49. God may love me, but he does not help me very much	4	3
50. Everyone who trusts the laws of nature trusts God	50	48

The replies from the judges rating the items in this part were handled in the same way as in the preliminary use of the test. The 130 judges were divided into two groups this time, however, upon the basis of whether or not they had scaled the statements before. Table XX gives the average ratings of the 250 judges arranged by groups. The final mean and standard deviations are given, followed by the mean value assigned to the question on the previous rating and the standard deviation at that time. Then follows the group of 38 scoring the test for the second time, then 92 new judges, and the total of the 130 combined. The close correspondence between the various groups of judges is striking, and answers the question as to whether or not a sufficient number

TABLE XX

AVERAGE OF 250 JUDGES' RATINGS OF ITEMS IN PART III ARRANGED BY GROUPS

Item	Final Mean	Final S. D.	First 120	First S. D.	Second 38	92	130
1 *(1)	3.5	.95	3.6	1.02	3.7	3.2	3.4
2 (3)	5.3	.84	5.4	.95	5.4	5.3	5.3
3 (5)	5.8	.81	5.7	.89	5.9	5.7	5.8
4 (7)	.8	1.01	1.0	.63	1.0	.5	.6
5 (9)	1.9	1.3	2.0	1.3	1.9	1.8	2.0
6 (2)	5.2	.91	5.1	.9	5.2	5.3	5.1
7 (4)	5.2	1.06	5.2	1.1	5.3	5.1	5.2
8 (6)	5.6	.73	5.6	.72	5.8	5.5	5.6
9 (8)	5.1	1.02	5.1	1.0	4.8	5.1	5.0
10 (10)	5.7	.75	5.7	.62	5.6	5.6	5.6
11 (11)	5.6	.64	5.6	.65	5.5	5.7	5.6
12 (15)	5.0	.75	5.1	.8	5.0	4.9	4.9
13 (17)	5.1	.89	5.1	.89	5.1	5.1	5.1
14 (19)	5.4	.96	5.5	.76	5.4	5.2	5.3
15 (21)	4.9	1.06	5.1	.98	5.1	4.8	4.8
16 (23)	.7	.9	.9	1.0	.9	.6	.6
17 (12)	1.6	1.1	1.7	1.1	1.9	1.4	1.6
18 (14)	4.9	1.2	4.9	1.3	5.2	4.6	4.8
19 (18)	.8	.98	1.1	1.0	.8	.5	.6
20 (20)	2.7	1.02	2.8	1.0	2.5	2.6	2.6
21 (22)	.7	.92	.9	1.0	.7	.5	.6
22 (24)	2.3	1.3	2.1	1.2	2.2	2.2	2.3
23 (27)	.6	1.2	.9	1.2	.7	.3	.4
24 (29)	5.6	.75	5.6	.85	5.6	5.5	5.6
25 (31)	4.9	1.0	5.0	.95	4.9	4.8	4.8
26 (35)	5.3	.87	5.4	.8	5.6	5.1	5.4
27 (37)	2.1	1.3	2.2	1.2	2.0	1.9	1.9
28 (39)	3.3	.95	3.5	.86	3.3	3.3	3.3
29 (26)	5.5	.71	5.6	.7	5.5	5.4	5.4
30 (30)	5.1	.9	5.2	.85	5.2	5.0	5.0
31 (32)	2.0	.95	2.2	1.1	2.0	1.5	1.7
32 (31)	.2	.51	.3	.58	.2	.2	.2
33 (38)	2.3	1.2	2.4	1.1	2.0	2.1	2.1
34 (40)	.2	.23	.4	1.0	.1	.1	.1
35 (41)	.6	.99	.7	.9	.3	.5	.5
36 (43)	4.5	1.02	4.7	.95	4.4	4.2	4.3
37 (45)	5.1	.84	5.1	.82	5.0	5.0	5.0
38 (47)	.6	.97	.7	1.0	.9	.4	.4
39 (42)	1.3	1.01	1.4	1.1	1.2	1.1	1.2
40 (48)	1.1	.9	1.2	.98	1.1	.8	.9
41 (51)	2.5	1.24			2.7	2.4	2.5
42 (53)	1.9	1.1			2.1	1.8	1.9
43 (55)	3.8	.83			4.0	3.7	3.8
44 (57)	2.6	1.35			3.0	2.5	2.6
45 (59)	4.3	1.09			4.4	4.3	4.3
46 (52)	2.6	.93			2.8	2.5	2.6
47 (54)	3.6	.99			3.7	3.6	3.6
48 (56)	4.4	1.09			4.6	4.3	4.4
49 (58)	2.6	1.09			3.1	2.4	2.6
50 (60)	3.8	1.33			4.1	3.7	3.8

*The number in parentheses is the number of the item as it appeared in the preliminary form of the test (Chapter III).

TABLE XXI

ITEMS OF PART III IN ORDER OF JUDGES' SCALING WITH NUMBER OF PUPILS CHECKING EACH

I. Items Scaled from 0 to .9.

Rank	No.	Scale Value	S.D.	Pupils	Rank	No.	Scale Value	S. D.	Pupils
1	34	.2	.23	1	6	16	.7	.90	11
2	32	.2	.51	4	7	21	.7	.92	7
3	38	.6	.91	6	8	19	.8	.98	1
4	23	.6	1.2	16	9	4	.8	1.01	26
5	35	.6	.99	37					

II. Items Scaled from 1.0 to 1.9.

Rank	No.	Scale Value	S.D.	Pupils	Rank	No.	Scale Value	S.D.	Pupils
10	40	1.1	.9	5	13	43	1.9	1.1	149
11	39	1.3	1.01	10	14	5	1.9	1.3	52
12	17	1.6	1.1	14					

III. Items Scaled from 2.0 to 2.9.

Rank	No.	Scale Value	S. D.	Pupils	Rank	No.	Scale Value	S.D.	Pupils
15	31	2.0	.95	15	19	41	2.5	1.24	22
16	27	2.1	1.3	48	20	42	2.6	.93	17
17	33	2.3	1.2	31	21	48	2.6	1.09	352
18	22	2.3	1.3	18	22	47	2.6	1.35	313
					23	20	2.7	1.01	38

IV. Items Scaled from 3.0 to 3.9.

Rank	No.	Scale Value	S. D.	Pupils	Rank	No.	Scale Value	S. D.	Pupils
24	28	3.3	.95	563	27	45	3.8	3.8	520
25	1	3.5	.95	352	28	50	3.8	1.33	319
26	44	3.6	.99	61					

V. Items Scaled from 4.0 to 4.9.

Rank	No.	Scale Value	S. D.	Pupils	Rank	No.	Scale Value	S. D.	Pupils
29	49	4.3	1.09	23	33	15	4.9	1.06	222
30	46	4.4	1.09	17	34	18	4.9	1.2	587
31	36	4.5	1.02	572					
32	25	4.9	1.0	546					

VI. Items Scaled from 5.0 to 5.9.

Rank	No.	Scale Value	S. D.	Pupils	Rank	No.	Scale Value	S. D.	Pupils
35	12	5.0	.75	421	43	26	5.3	.87	566
36	37	5.1	.84	430	44	14	5.4	.96	358
37	13	5.1	.98	535	45	29	5.5	.71	504
38	30	5.1	.9	514	46	11	5.6	.64	553
39	9	5.1	1.02	528	47	24	5.6	.75	259
40	6	5.2	.91	545	48	8	5.6	.73	274
41	7	5.2	1.06	337	49	10	5.7	.75	552
42	2	5.3	.84	439	50	3	5.8	.81	403

of judges had been used. The final mean for all except ten questions represents a combination of the first 120 and the second 130, or a total of 250 judges. The ten statements occurring for the first time in this scale were judged only by the 130 judges. Upon the basis of Rugg's criterion for an adequate random sampling,

referred to in this connection in the preceding chapter, the number of judges would seem to be sufficient. The mean and standard deviations vary but little. This is particularly true of the items selected for the final scale.

Table XXI shows the correspondence between the judges' scale and the statements of the pupils' reaction to this. In this table the statements have been arranged in order upon the basis of the judges' scaling.

On the basis of the data furnished by this table, items were selected for the final scale. Three criteria were used. In the first place, the mean scale value of the item must have varied but little from one group of judges to another; second, the standard deviation for the item must be low; not more than 1.0 was arbitrarily selected. This means that 68.26 per cent of the judges agreed within two points on the scale.

The third criterion, which was considered of more importance than criterion number 2, was the number of pupils checking the item. For this only reports of the Church School group were used. It was felt that the select character of this group would lead to a checking of the scale by the majority somewhere about 5.0, and that most of the pupils would check between 3.0 and 5.8. Practically this meant that the items included in the lower part of the scale, from .2 to 3.0, should have few check marks by the Church School group.

The application of these criteria is seen in Table XXII. Here are given the rank and number of the item, the mean scale value assigned by the judges, the standard deviation, and the number of pupils checking the item.

In studying this table it will be noted that the pupils' response to the items below 3.3 is small. In certain cases among these items the standard deviation is larger than allowed by the criteria selected; however, the larger standard deviation, which represented more disagreement among the judges, was felt to be more than balanced by the small number of pupils checking. Here the pupil response was considered of greater importance than the judges' rating. Other standard deviations which are above 1.0 are explained upon the same basis.

Chart 3

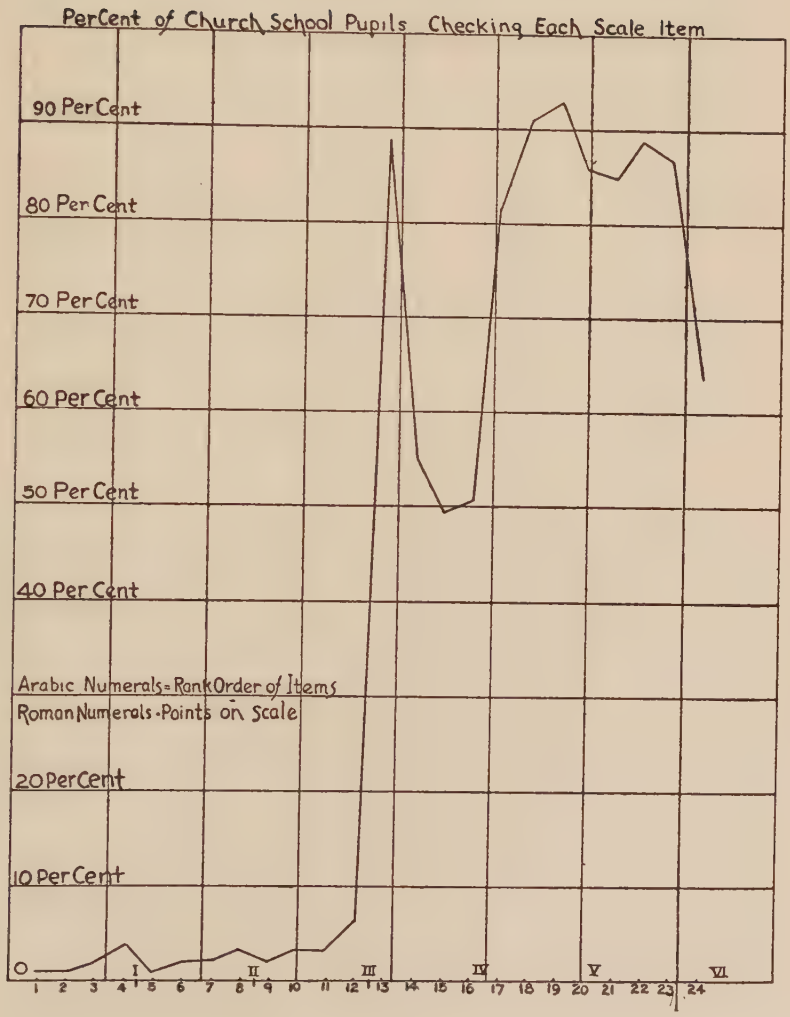

Per Cent of Church School Pupils Checking Each Scale Item
90 Per Cent
80 Per Cent
70 Per Cent
60 Per Cent
50 Per Cent
40 Per Cent
Arabic Numerals = Rank Order of Items
Roman Numerals = Points on Scale
20 Per Cent
10 Per Cent
0
I
II
III
IV
V
VI
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

TABLE XXII

MEAN SCALE VALUE, STANDARD DEVIATION, AND PUPIL RESPONSE OF ITEMS SELECTED FOR SCALE IN PART III

Rank	Item	Value	Standard Deviation	No. of Pupils Checking
1	34	.2	.23	1
2	38	.6	.97	6
3	16	.7	.9	11
4	4	.8	1.01	26
5	40	1.1	.9	5
6	39	1.3	1.01	10
7	17	1.6	1.1	14
8	42	1.9	1.1	17
9	31	2.0	.95	15
10	22	2.3	1.3	18
11	46	2.6	.93	17
12	20	2.7	1.02	38
13	28	3.3	.95	563
14	1	3.5	.95	352
15	47	3.6	.99	313
16	50	3.8	1.33	319
17	45	4.3	1.09	520
18	36	4.5	1.02	572
19	18	4.9	1.2	587
20	25	4.9	1.0	546
21	13	5.1	.89	535
22	26	5.3	.87	566
23	11	5.6	.64	553
24	3	5.8	.81	403

It will be noted that item 28, which is ranked as number 13 in the scale, has a low standard deviation, .95, which represents high agreement among the judges, but at the same time it has a high pupil response. More than 200 beyond the number of pupils represented in the following items at approximately the same scale level checked this item. If there had been available another item to substitute at this place in the scale, that item would have been used. As it is, item number 28 is retained only because dropping it out would leave too great a gap in the scale. This is one of the evident weak spots in the scale.

Chart 3 shows the per cent of Church School pupils checking the items selected for the scale. This chart shows clearly the disproportionate number checking item number 28.

PART IV—"WHAT DO YOU BELIEVE ABOUT GOD?"

The revision of Part IV has been described in detail. Table XXIII shows the per cent of Church School and high school

TABLE XXIII

PER CENT OF PUPILS CHECKING EACH ITEM IN PART IV

Item		V. S.[1] No	No	Uncertain	Yes	V. S. Yes
1. Do you believe that God is a loving Father?	Ch. S.	1	1	4	29	62
	H. S.	1	3	8	39	41
2. Do you believe that God is working through us to make the world better?	Ch. S.	1	1	6	41	48
	H. S.	1	3	17	42	30
3. Do you believe that God is present everywhere?	Ch. S.	1	1	5	25	54
	H. S.	1	3	9	37	30
4. Do you believe that God knows everything, that he has all wisdom?	Ch. S.	1	2	6	29	40
	H. S.	2	2	17	32	39
5. Do you believe that God is not a person but is an impersonal Force that follows the laws of nature in the way it works?	Ch. S.	15	18	28	14	10
	H. S.	12	27	27	12	8
6. Do you believe that God is but another name given for the laws of nature?	Ch. S.	24	39	19	5	4
	H. S.	22	36	21	7	2
7. Do you believe that God will set aside the laws of nature, such as those governing rain, in order to please you or your group?	Ch. S.	47	35	8	2	2
	H. S.	32	35	16	4	2
8. Do you believe that God is impersonal substance, existing in and through but above and beyond our universe?	Ch. S.	14	20	25	16	8
	H. S.	12	21	31	11	6
9. Do you believe that God is the impersonal moral law of the universe, the principle of justice at the heart of everything?	Ch. S.	6	11	23	29	14
	H. S.	5	8	26	30	11
10. Do you believe that it is impossible to know anything at all about God?	Ch. S.	52	39	10	7	2
	H. S.	25	38	11	11	2
11. Do you believe that God is a name for the impersonal spiritual laws of the universe, which are alive and which operate themselves?	Ch. S.	19	33	26	7	2
	H. S.	16	32	26	8	1
12. Do you believe that God is interested in you as an individual?	Ch. S.	1	2	9	48	35
	H. S.	2	5	17	47	18
13. Do you believe that God is so kind that he will not punish anyone?	Ch. S.	27	52	11	2	1
	H. S.	20	46	17	2	2
14. Do you believe that God is merely a beautiful thought to help us to live better?	Ch. S.	29	41	18	5	1
	H. S.	23	40	18	5	2

[1]V. S. means "Very Strongly."

Item		V. S. No	No	Uncertain	Yes	V. S. Yes
15. Do you believe that the world is governed by many gods, each with its own special responsibilities?	Ch. S.	66	24	1	1	1
	H. S.	48	31	5	1	1
16. Do you believe that God is a man, the most wonderful man that ever lived?	Ch. S.	19	21	16	16	20
	H. S.	16	21	16	20	14
17. Do you believe that God is unkind because he allows pain and suffering?	Ch. S.	39	49	8	1	1
	H. S.	28	47	11	1	1
18. Do you believe that God is far off, outside the world, and that therefore you cannot reach him?	Ch. S.	38	32	7	2	1
	H. S.	38	43	14	2	2
19. Do you believe that God is merely an idea that has grown up out of man's imagination to help us to explain things which we do not understand?	Ch. S.	36	32	6	2	1
	H. S.	35	35	12	4	2
20. Do you believe that God is the Creator of the world?	Ch. S.	2	2	3	25	58
	H. S.	3	3	11	33	40
21. Do you believe that God is an old man with a long white beard?	Ch. S.	53	27	8	2	1
	H. S.	43	30	11	2	2
22. Do you believe that God is the Ruler of the world, controlling everything that happens?	Ch. S.	3	7	17	30	36
	H. S.	3	10	20	32	22
23. Do you believe that God has complete and absolute power over everything?	Ch. S.	3	7	13	29	40
	H. S.	3	8	16	29	28
24. Do you believe that there is no God of any kind?	Ch. S.	71	17	2	1	1
	H. S.	49	27	6	2	2
25. Do you believe that the world is filled with many spirits which have a real influence upon our living?	Ch. S.	43	28	12	5	1
	H. S.	33	31	15	5	1
26. Do you believe in one God who is three persons, God the Father, God the Son, and God the Holy Spirit?	Ch. S.	2	3	10	29	47
	H. S.	6	8	17	29	26
27. Do you believe that God is willing to help only those who are trying to help themselves?	Ch. S.	11	25	19	25	11
	H. S.	7	28	19	23	10
28. Do you believe that God is unjust because he allows some grafters to become rich?	Ch. S.	33	49	8	2	1
	H. S.	21	45	17	4	1
29. Do you believe that God holds you responsible for everything you do?	Ch. S.	5	23	20	33	11
	H. S.	2	23	31	28	7

Item		V. S. No	No	Uncertain	Yes	V. S. Yes
30. Do you believe that God is always ready and anxious to have fellowship with individuals?	Ch. S.	1	2	7	45	38
	H. S.	1	5	27	36	21
31. Do you believe that God has nothing at all to do with your life?	Ch. S.	55	34	3	1	1
	H. S.	38	38	9	2	1
32. Do you believe that God can be reached with equal ease by every individual and in every place?	Ch. S.	8	22	13	28	20
	H. S.	5	22	19	23	15
33. Do you believe that God is an infinite Spirit, wise, loving, just, and powerful?	Ch. S.	2	2	11	35	42
	H. S.	1	6	20	34	23
34. Do you believe that God is the friend of everyone who has faith in him?	Ch. S.	1	1	2	42	51
	H. S.	1	2	9	43	30
35. Do you believe that everything is God and God is the only reality and that nothing real exists outside of God?	Ch. S.	7	20	37	11	10
	H. S.	5	16	40	14	8
36. Do you believe that God really revealed himself to us through Jesus Christ?	Ch. S.	1	1	10	37	43
	H. S.	1	4	22	23	21
37. Do you believe that God really reveals himself to us through nature?	Ch. S.	1	3	14	44	30
	H. S.	2	6	29	35	12
38. Do you believe that God is a single person and that there is but one such person?	Ch. S.	7	13	22	28	17
	H. S.	4	11	27	24	14
39. Do you believe that through faith you can have an experience of God just as real in its way as your experience with an earthly friend?	Ch. S.	1	4	17	36	31
	H. S.	2	5	30	27	13
40. Do you believe that God is still at work in the world?	Ch. S.	1	1	5	38	47
	H. S.	2	2	15	39	27
41. Do you believe that God is the Father only of certain individuals or groups and that he is not the Father of all mankind?	Ch. S.	53	32	5	2	1
	H. S.	31	37	11	3	3
42. Do you think that your answers to the preceding questions in this part of the test give a satisfactory picture of your belief about God?	Ch. S.	2	4	17	51	20
	H. S.	2	7	24	38	12

TABLE XXIV

NUMBER OF PUPILS CROSSING OUT QUESTIONS IN PART IV

Question	Church School	High School
1	5	24
2	4	25
3	60	52
4	6	22
5	35	38
6	26	34
7	17	45
8	79	55
9	79	55
10	7	30
11	55	42
12	4	29
13	5	35
14	6	35
15	9	31
16	18	34
17	12	35
18	10	32
19	19	33
20	7	24
21	11	38
22	15	39
23	8	36
24	13	39
25	22	42
26	20	43
27	15	37
28	22	36
29	15	33
30	14	36
31	11	38
32	18	42
33	20	45
34	6	44
35	41	54
36	14	32
37	19	45
38	39	56
39	47	55
40	14	40
41	21	46

pupils checking each of the items in this part of the test. At the same time the table indicates the basis used for scoring each item. The scoring was based upon the response of the Church School pupils to the question. The score ranged from 1 to 5 for each question. For the response which corresponded to the response of the greatest number of the Church School group 5

was given; 4 was given to the response which corresponded to the next greatest number; 3 to the next; and 2 and 1 to the remainder. For example, item 1 would be scored as follows: The pupil checking in the column "Very Strongly Yes" would receive a score of 5. If he checked in the column "Yes" he would receive a score of 4; if in the column "Not Certain," a score of 3; if in the column "No," a score of 2; and if in the column "Very Strongly No," a score of 1. This scoring was based upon the actual number of pupils checking, rather than upon the per cent, which is not so accurate. Table XXIII, however, will indicate the basis for the scoring plan.

On this basis a series of scores was assigned to each item and the final score of the part was the total of the scores made upon each item.

Because it was felt unfair to penalize a pupil for failing to understand a question and crossing it out, a chart for transmuting the raw score into a per cent score was made. (See Appendix, pp. 91-93.) This chart took account of ten blanks or questions crossed out by the pupil. The per cent score was used in making comparison with other scores of the test. Table XXIV shows the number of questions crossed out by both the Church School and the high school groups.

CHAPTER V

VALIDITY, RELIABILITY, AND NORMS

The preceding chapters have presented and discussed the procedure followed in constructing the test and the general pupil reactions to it in its preliminary, experimental, and final forms. This chapter will consider the validity and reliability of the test and present the norms. The basis for this discussion is the pupil reactions to the test in its revised form, as these are presented in Chapter IV.

As an introduction to the consideration of validity and reliability, the question of the conscientiousness of the pupils' responses needs to be discussed. Did the pupils answer as they thought they were expected to answer, or did they really follow their own thinking? It is impossible to answer this question definitely. However, as has been indicated in Chapter II, pp. 29, 30, special efforts were made to encourage serious response. The precautions taken and the effect of these precautions need to be summarized here.

The introductory statement at the beginning of the test was intended to take away any thought of right or wrong answers and to make the test seem valuable to the pupil in his thinking rather than in any mark he might receive from it. Further, it was not necessary for the pupil to identify himself by signing his name, unless for some reason his particular leader desired it. Only one or two leaders made this request. Some of the other pupils did sign at the end of the test, but most of the tests carried no signatures.

In addition to these attempts to remove occasions for answering to gain a mark or to meet with approval, definite encouragements to conscientious response were given in the directions for Parts II, III, and IV. Care was taken in wording the statements to avoid any inference as to the possibility of dishonest response. Each was positive and set honesty in thinking as a desirable attitude. Theoretically, therefore, it seems probable that in their responses the pupils were following their own thinking.

An objective evidence in support of this answer is found in the responses of the Church School group to Part II. Here the response desired by the Church School leaders was clearer than in the other parts of the test. If the pupils were trying to answer as they thought they were expected to, they could have scored one hundred per cent. However, 354, or more than 55 per cent of the group, scored below 85, and of these only 46 were below 50. Furthermore, the pupils were asked to cross off any questions which represented situations they were not actually facing. In response to this request, 225 questions were crossed off by the group. The large number of scores neither high nor low and the number of questions crossed off seem to indicate an effort by members of the group to face frankly the situations suggested and to record their reactions with fairness and discrimination. It is reasonable to suppose that the same attitude was present throughout the test.

VALIDITY

Ruch, in "The Objective or New-Type Examination,"[1] defines validity as "the degree to which an examination measures what it claims to measure." Validity could be determined directly by comparing the results of the test with the results of some other similar test which has been standardized.[2] This procedure was not possible, however, because *(a)* two separate tests could not be given in the situations where this test was administered, and *(b)* a second test similar to this was not available for such use, even had its inclusion been practicable.

In Part III of the test a direct plan for determining reliability was used. This plan, involving the rating of each item by 130 judges, has been explained. (See Chapter IV, p. 67.) The tables accompanying the explanation give these data and also show the "index of ambiguity," the standard deviation, which is an additional evidence of validity so far as the items of this part of the test are concerned.

Since, however, a direct method of determining the validity of the entire test is impossible, recourse must be had to indirect

[1]Ruch, G. M., "The Objective or New-Type Examination," p. 40.
[2]Garrett, Henry E., "Statistics in Psychology and Education," p. 266.

methods, which do not yield statistical measures. In the first place, the materials for the test were selected because they represented the particular element to be measured.[3] This has already been shown in describing the building of the test, but a brief review is in place here.

In Part I the measure desired was the knowledge of the meaning of certain words used later in the test. The words selected were words in the test that had actually given difficulty to pupils in its preliminary use. Part II attempted to discover whether faith in God was an influence in the actual decisions of the pupils. The situations demanding decisions which were selected were actual situations as reported by high school boys and girls themselves. These were in turn checked and approved by competent judges as being valid. Part III, which sought to measure the attitude of trust or confidence in God, contained statements of opinions involving trust or distrust which were rated as valid by the 120 judges scaling them. In Part IV the purpose was to find out the pupils' belief about God, and the items used were statements of belief about God, in question form, collected from various sources and checked by competent judges.

A second plan for establishing validity was to secure the pupils' own opinion regarding his performance in Parts III and IV. At the end of Part III, "How Much Do You Trust God?" the pupil was asked to scale himself on a scale running from complete distrust in both the power and the love of God, to complete trust in both his power and his love. A sample scale was given, checked at the mid-point or neutral. This point was selected for marking as the least apt to influence the pupil's own response. The scale values which the Church School pupils gave themselves were recorded and correlated with the scale scores which they made by checking the items of this part. The correlation thus obtained was .4, which was not significant. Two facts need to be considered, however. In the first place, the number of pupils who scaled themselves at or within one scale point of complete trust was large, 469, or 72 per cent, which seemed to indicate a ten-

[3]Ruch, G. M., "The Objective or New-Type Examination," pp. 29, 40.

dency on their part to overestimate this attitude. The second fact was the homogeneity of the group response, which lowered the correlation.[4] (This will be discussed more fully in connection with the reliability of the test. See pp. 83, 84.)

The pupil test of validity in Part IV, "What Do You Believe About God?" was question 42: "Do you think that your answers to the preceding questions in this part of the test give a satisfactory picture of your belief about God?" This was answered by the Church School group as follows: Very Strongly No, 2; No. 4; Not Certain, 17; Yes, 51; Very Strongly Yes, 20; or a total of 71 per cent in the affirmative. The high school group answered as follows: Very Strongly No, 2; No, 7; Not Certain, 24; Yes, 38; Very Strongly Yes, 12; or a total of 50 per cent in the affirmative. These responses would indicate that, for the most part, the pupils believed Part IV to be valid.

A third indirect approach to establishing validity was the principle given by Ruch,[5] that a valid test will discriminate differences in ability. The Religious Discovery Test was taken by two groups of pupils seemingly somewhat different in their religious attitudes. The comparison of these two groups (Chapter V, p. 85) indicated that the Protestant Church School group was more closely related to the Church and Sunday School than the high school group and hence probably had somewhat stronger or more definite religious attitudes. Does the test indicate any such difference in the responses of the two groups? The following charts will answer this question.

Chart 4 shows the scores of the two groups upon Part I of the test. Here the performance of the high school group is evidently superior to that of the Church School group, due possibly to its school grade average. (See Chapter IV, pp. 59-61.)

Chart 5 gives the comparative scores made upon Part III by the two groups. Here the Church School group shows a median score of 86.45 and the high school group a median score of 76.65. This part of the test clearly discriminates between these two groups.

---

[4]Ruch, G. M., op. cit., p. 441.
[5]Ibid., p. 33.

Chart 4

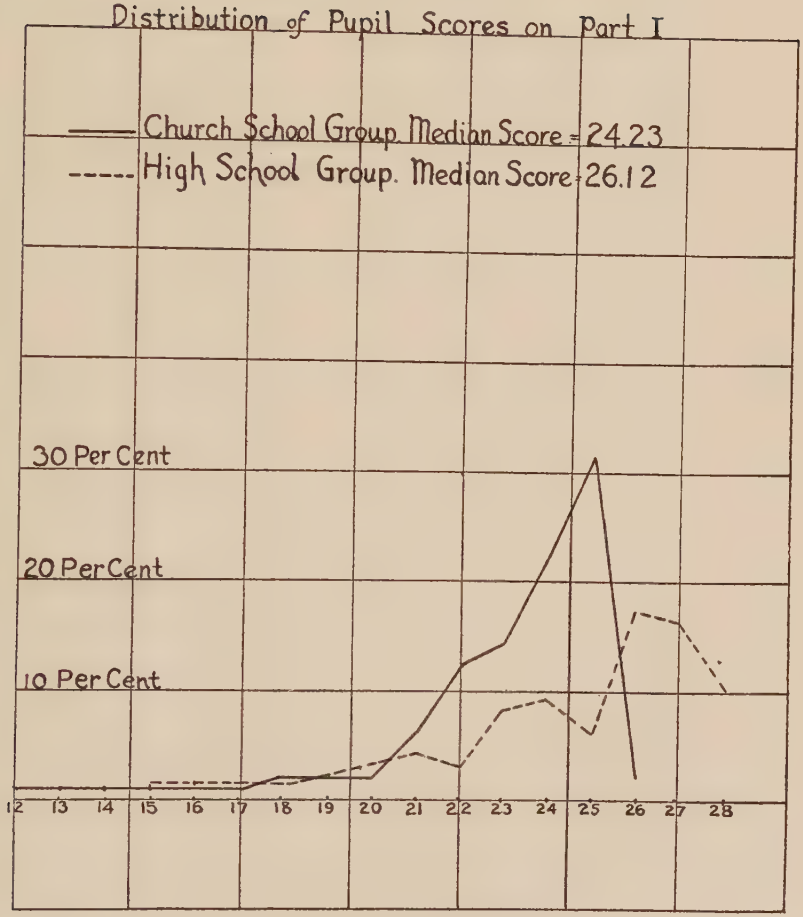

Distribution of Pupil Scores on Part I
Church School Group. Median Score = 24.23
High School Group. Median Score = 26.12
30 Per Cent
20 Per Cent
10 Per Cent
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Chart 5

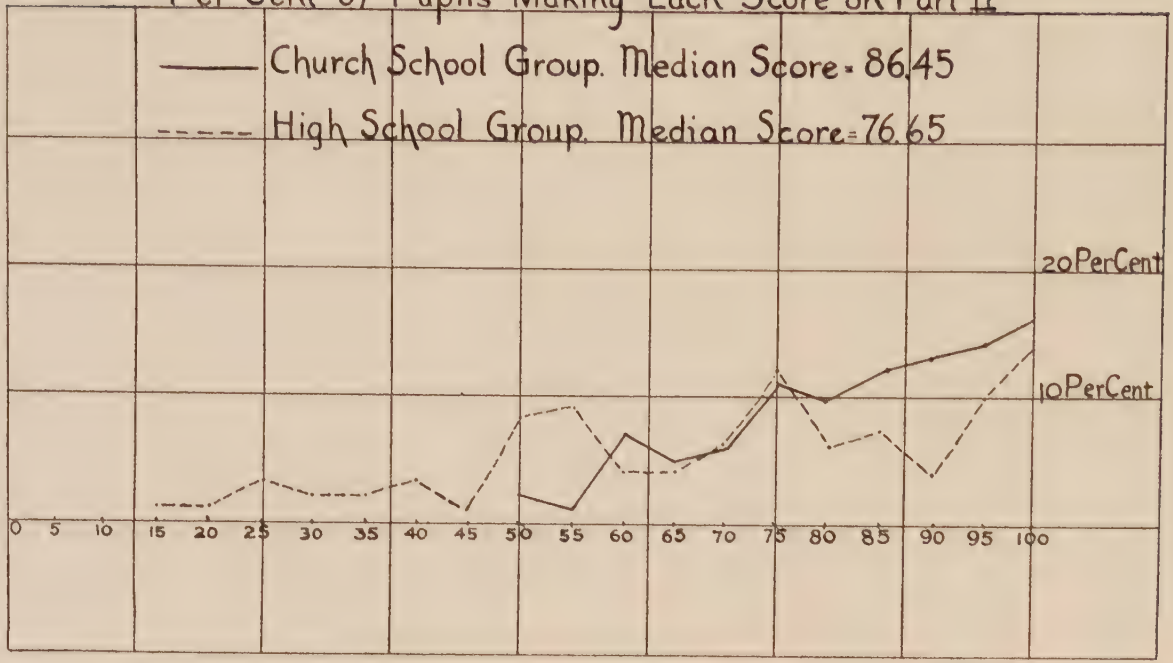

Per Cent of Pupils Making Each Score on Part II
Church School Group. Median Score - 86.45
High School Group. Median Score - 76.65
20 Per Cent
10 Per Cent
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Chart 6

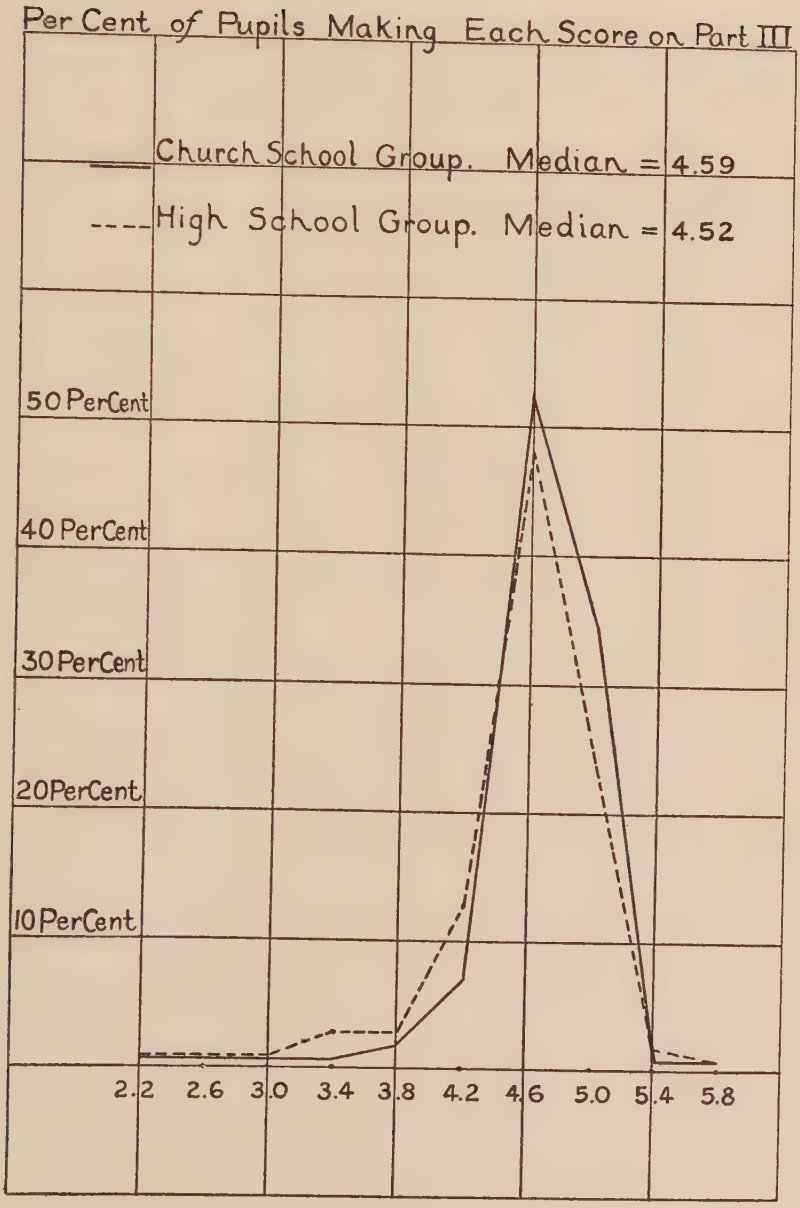

Per Cent of Pupils Making Each Score on Part III
Church School Group. Median = 4.59
High School Group. Median = 4.52
50 PerCent
40 PerCent
30 PerCent
20 PerCent
10 PerCent
2.2
2.6
3.0
3.4
3.8
4.2
4.6
5.0
5.4
5.8

Chart 7

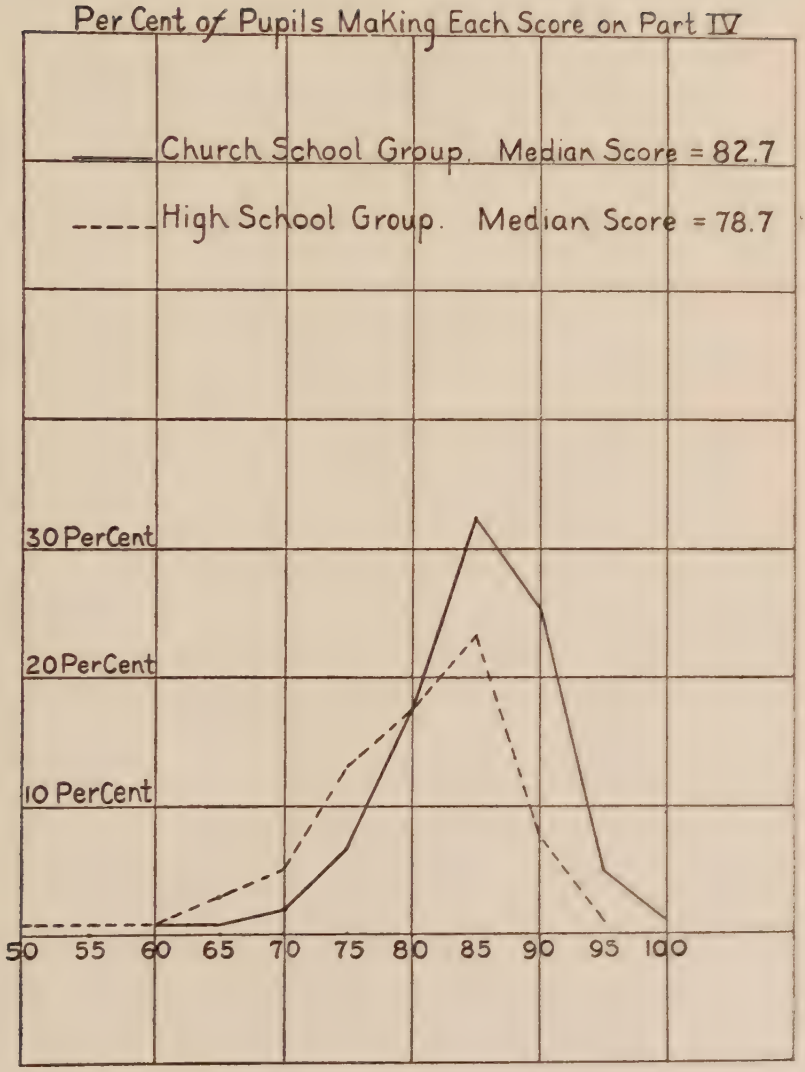

Per Cent of Pupils Making Each Score on Part IV
Church School Group. Median Score = 82.7
High School Group. Median Score = 78.7
30 PerCent
20 PerCent
10 PerCent
50 55 60 65 70 75 80 85 90 95 100

Chart 8

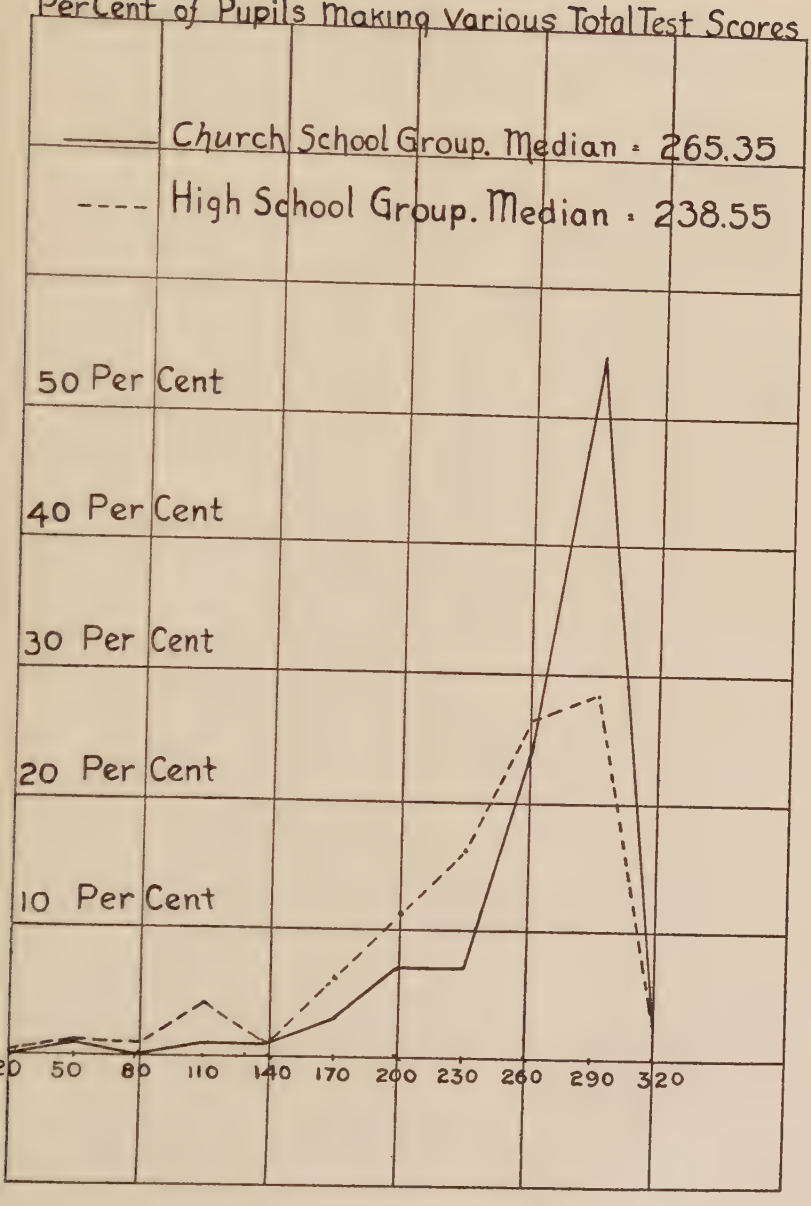

Per Cent of Pupils Making Various Total Test Scores
Church School Group. Median = 265.35
High School Group. Median = 238.55
50 Per Cent
40 Per Cent
30 Per Cent
20 Per Cent
10 Per Cent
20
50
80
110
140
170
200
230
260
290
320

Chart 6 compares the two groups in their performance upon Part III of the test. Here the scale scores of each were used. This chart indicates very little difference between the two groups. The median for the Church School group was 4.59 and for the high school group, 4.52, the former being but slightly higher than the latter.

Chart 7 indicates the per cent scores made by the two groups on Part IV. Here the discrimination between the two groups is more evident, the median for the Church School distribution being 82.7 and that for the high school, 78.7.

Chart 8 shows the distribution of the total test scores made by the Church School and the high school pupils. The median test score for the Church School group was 265.35, and for the high school group, 238.55. The total test score was secured by converting the raw scores of Parts II, III, and IV into per cent scores (see transmutation tables in Appendix, pp. 91-93), and adding these with the raw score of Part I, the total of the four being the pupil's test score.

These charts show that in its three major parts and as a whole the test did discriminate between two groups of varying ability, even though the variation was not great. This is an added reason for believing the test to be valid.

A fourth item bearing upon the validity of the test is the relationship between its major parts. Up to this point the validity of the different parts has been considered. It is necessary in addition to determine the relationship between the four parts of the test upon the basis of the responses of the pupils. The statistical technique used was the scattergram grouping of scores and the application of the product-moment formula, described in detail by Rugg[6] and Garrett.[7]

The resulting correlations between the responses of the Church School pupils on the various parts of the test were as follows:

---

[6]Rugg, Harold O., "Statistical Methods Applied to Education," pp. 260-276.

[7]Garrett, Henry E., "Statistics in Psychology and Education," pp. 163-168.

1. Part I	and Part II	r =	— .0757
2. Part I	and Part III	r =	— .062
3. Part I	and Part IV	r =	.0707
4. Part II	and Part III	r =	.397
5. Part II	and Part IV	r =	.232
6. Part III	and Part IV	r =	.317

These results indicate almost a complete lack of relationship between the Parts. This probably should be expected with Part I, since it did not seek to measure an aspect of faith in God.

The almost complete absence of correlation between Parts II, III, and IV of the test may suggest a lack of validity in the test as a whole. It is possible, however, that this lack of correlation is a function of the attitude being measured. Religious leaders are generally in agreement that, although the ideal may be a faith in God strong alike in belief and trust, and effective in living, the ideal is far from being realized.[8] A group of such leaders who reviewed this test in its preliminary form predicted that there would probably be but little correlation of the pupil performance on Parts II, III, and IV. Three adult judges of Group C who took the test pointed out with surprise their lack of consistency in the three parts. It would seem, therefore, that the lack of correlation between Parts II, III, and IV is a further indication of the probable validity of the test.

The validity of the test, therefore, rests upon the validity of its various parts, as shown by the agreement of competent judges, the character of the materials, the opinion of the pupils, and the power of each part and the test as a whole to discriminate between pupil groups of varying ability.

RELIABILITY

Ruch[9] defines reliability as "that phase of validity which refers to the accuracy of a test as a measuring device." A test with

---

[8]From recent discussions of groups of interdenominational leaders at Columbus, Ohio.

[9]Ruch, G. M., "The Objective or New-Type Examination," p. 62. For a full discussion of the meaning of reliability, see pp. 40-63.

high reliability will yield the same or very nearly the same scores when repeated by the same group under the same conditions. Ruch points out that "reliability is guaranteed in two principal ways: *(a)* objectivity of scoring, and *(b)* extended sampling (length of test)." Reliability may be determined either by repetitions of the same test, or its equivalent forms, or by using the results of a single application of the test combined into two independent sets of scores.[10]

The Religious Discovery Test, as has been indicated in the descriptions of scoring procedures (Chapter IV), was scored in a completely objective manner. The length of the test, however, presented a question which could best be answered by determining its coefficient of reliability. This was done by using the second of the two methods suggested above, namely, that of dividing the test scores into two groups for each pupil and correlating them with each other. The first step in the procedure followed with each part was to divide the items into two groups. The scores made by each pupil were then tabulated in scattergram form and the correlation figured by using the product-moment formula, as the procedure is described by Rugg.[11] The correlation thus obtained was "stepped up" by the "Spearman prophecy formula" to give the estimated coefficient of reliability.[12]

An important element in determining the reliability of a test is the homogeneity of the group by whose responses the reliability is being judged. The more homogeneous the group is in its responses, the lower will be the value of "r," and the less homogeneous the group, the higher the value of "r." The degree of homogeneity will be represented by the "spread" of the responses, of which the standard deviation is a measure. Ruch[13] declares that without the value of this measure, standard deviation, it is

---

[10]Ibid., pp. 412-422. Also Garrett, Henry E., "Statistics in Psychology and Education," p. 271.

[11]See footnotes 6 and 7.

[12]Garrett, Henry E., "Statistics in Psychology and Education," p. 271. Ruch, G. M., "The Objective or New-Type Examination," p. 418.

[13]Ruch, G. M., "The Objective or New-Type Examination," p. 90. See also Rugg, Harold O., "Statistical Methods Applied to Education," p. 256.

impossible to judge the reliability of a test. A test which shows both "r" and standard deviation low in value may be much more reliable than a test in which both are high. This was an important consideration in determining the reliability of the Religious Discovery Test, where the Church School group was quite homogeneous. For this reason the standard deviation value is given in each instance.

Part I—"What Do These Words Mean?"

The words in this list were arranged in order as they happened to come from the sources used. Because this was a chance order the list was divided into two groups on the basis of odd and even numbering, the odd-numbered items being placed in one list and the even in the other. The correlation between pupil performance upon these two lists was:

$$r = .638$$

Applying the Spearman prophecy formula, the estimated coefficient of reliability for this part of the test was found to be:

$$\text{Coef. of Rel.} = .677 \quad \text{P.E.} = \pm .014 \quad \text{S.D.} = 7.51$$

Part II—"What Helps in Your Decisions?"

In dividing the items of this part of the test into two groups, the plan of alternate grouping was followed as in Part I. The odd-numbered items were included in one group and the even in the other. This was considered a fair division, since each item represented a situation in which faith in God might be influential and there seemed to be no objective basis for deciding any differences between these situations.

Upon the basis of the divisions indicated above, the scores of the pupils on the odd-numbered items were correlated with their scores on the even-numbered items. This correlation was:

$$r = .684$$

By using the Spearman prophecy formula, this correlation yielded a coefficient of reliability as follows:

$$\text{Coef. of Rel.} = .72 \quad \text{P.E.} = \pm .014 \quad \text{S.D.} = 12.44$$

Part III—"How Much Do You Trust God?"

In dividing into two groups the items which had been selected for the scale of trust there was no possibility of following the plan used in the preceding parts of the test. To select every other item of the scale would weight the even numbers, which would be constantly higher on the scale than the odd. Therefore an alternating plan was followed which put together for scale A the items: 1, 4, 6, 7, 9, 12, 14, 15, 17, 20, 22, and 23. Scale B was composed of items: 2, 3, 5, 8, 10, 11, 13, 16, 18, 19, 21, and 24. This arrangement made the items put into each scale approximately equal sets. To determine how nearly equal they were, the number of pupil responses to the items on scale A and scale B were computed. It was found that the total of items in scale A was 2954; scale B, 3053. Then the total scale value of the scale items in each scale was computed, the total items in scale A being 35.8, and the total items in scale B, 36.6. Inasmuch as these two sets of totals were so nearly equal it was felt that the two scales could be considered as representing equal divisions of the total scale items. This principle for dividing the scale into two parts follows the procedure of Thurstone and Chave in determining the reliability of their attitude scale.[14]

The score of each pupil was computed upon the basis of his checking of the items in each scale. This score was the average of the value of the items checked. These two sets of scores were then correlated and the result was:

$$r = .3912$$

From this score was computed the coefficient of reliability by using the Spearman prophecy formula.

$$\text{Coef. of Rel.} = .4802 \quad \text{P.E.} = \pm .033 \quad \text{S.D.} = 2.76$$

Part IV—"What Do You Believe About God?"

The character of the items in this part of the test again made divisions into two groups difficult. There were no "right" or

[14]Thurstone, L. L., and Chave, E. J., "The Measurement of Attitude," p. 65.

"wrong" answers, the scoring of the parts being determined by the pupils' reactions, as has already been indicated. (See Chapter IV, pp. 71-76.) Upon this basis there were eighteen items which were strongly affirmative and twelve items strongly negative. These were alternately assigned to section A and section B, giving section A nine affirmatives and six negatives and the same number of each to section B. The remaining eleven items were doubtful in the responses of pupils to them. Seven of them showed some tendency either toward negative or toward affirmative. These were divided, giving an equal number of affirmatives and negatives to each scale. One item was left and this was not used in either group. The remaining four items, being distinctly uncertain, were assigned alternately to the two groups.

This plan of grouping was followed in an attempt to secure two sections which would offer about the same opportunities for negative and affirmative pupil responses.

The scores on sections A and B were tabulated and correlated and from this correlation the coefficient of reliability was determined as in the preceding parts. The scales for the result of this computation were as follows:

$$r = .812$$

$$\text{Coef. of Rel.} = .826 \quad \text{P.E.} = \pm .0097 \quad \text{S.D.} = 7.25$$

The Test as a Whole

Having determined the reliability for each of the parts of the test, it was necessary to consider the test as a whole. Since the items in each part had been divided into two groups, and the pupil reactions to them tabulated, it was easy in the same way to divide the entire test into two groups. Upon the basis of this division the total scores of the pupils on each of these groups of items were computed and tabulated. The result of this correlation between section A and section B of the test as a whole was:

$$r = .874$$

$$\text{Coef. of Rel.} = .881 \quad \text{P.E.} = \pm .013 \quad \text{S.D.} = 18.32$$

The Coefficient of Reliability

In discussing when the coefficient of reliability is "high" and when "low," Ruch[15] says that correlations of .5 to .8 are "fairly significant" and that correlations of .8 to .95 are "fairly high." This he considers to be a conservative estimate. On this basis the test as a whole may be called "fairly reliable."

NORMS

The value of norms for a test is in question. Ruch[16] declares that the value of norms has been greatly overestimated because local conditions and pupil differences of various kinds make their application uncertain.

Watson,[17] in describing norms in religious education, indicates that the basis upon which norms should be given is not determined.

There would seem to be some value, however, in indicating the norms that have resulted from the use of this test.

FIRST QUARTILE NORMS

Protestant Church School			High School (Tentative)	
Part I	22.52		23.67	
Part II	75.14		57.13	
Part III	73.9	(Scale 4.39)	73.2	(Scale 4.32)
Part IV	79.44		73.81	
Total Test	243.29		202.17	

MEDIAN NORMS

Protestant Church School			High School (Tentative)	
Part I	24.23		26.12	
Part II	86.45		76.65	
Part III	77.9	(Scale 4.59)	77.2	(Scale 4.52)
Part IV	82.7		78.7	
Total Test	265.35		238.55	

THIRD QUARTILE NORMS

Protestant Church School			High School (Tentative)	
Part I	25.26		27.33	
Part II	96.74		94.79	
Part III	82.1	(Scale 4.81)	80.5	(Scale 4.75)
Part IV	87.91		84.06	
Total Test	279.22		267.27	

These norms are based upon the actual performance of the pupils in each group. It is possible that leaders using the test

[15]Ruch, G. M., "The Objective or New-Type Examination," p. 90.
[16]Ibid., p. 66.
[17]Watson, Goodwin B., "Experimentation and Measurement in Religious Education," pp. 153, 165.

may desire to measure by some ideal standard rather than by the average of pupils as they now are. Such an ideal standard could be set by the leader for each part of the test, and for the test as a whole, either by following his own judgment as to what pupil performance should be or by securing the consensus of judgments of other leaders. On either basis the norms given above could be raised or lowered. If this is done, however, the results must be considered, not as pupil norms, but as ideals or standards set by leaders.

It must be remembered that the norms given above are not ideals or goals. They represent actual pupil reactions to the test. The test does not attempt to set up any standards of the right conception of God, of the proper amount of trust in God, or of the degree to which faith in God should affect conduct. The test has been scored without regard to such standards.

CHAPTER VI

GENERAL SUMMARY AND CONCLUSIONS

1. The Religious Discovery Test measures the effect of faith in God upon certain conduct situations, the attitude of trust or confidence in God, and the content of belief about God as these are found in Protestant Church School pupils, fifteen, sixteen, and seventeen years of age, with tentative norms for high school pupils of the same ages. This study has produced no data on pupils of other religious groups and the data on high school groups are insufficient for satisfactory high school norms. (Chapter I, p. 11; Chapter V, pp. 87, 88.)

2. The lack of correlation between the three traits measured by the test, all of which adult judges agreed should be aspects of faith in God, indicates either that the judges were wrong in their assumption or that the religious education of the pupils has failed to make the attitude of faith in God sufficiently inclusive. (Chapter V, pp. 81, 82.)

3. The selection of the items for the scale of trust in God upon the basis of the reactions of pupils as well as of competent judges indicates the necessity for considering pupil reactions to scale items in constructing an attitude scale of this type. (Chapter IV, pp. 70, 71.)

4. The data available show that the Religious Discovery Test, both as a whole and in its several parts, is a valid instrument for measuring the three selected aspects of faith in God. (Chapter V, pp. 78-82.)

5. The test, as a whole, is reliable, having a coefficient of reliability which equals .881, with a probable error of plus or minus .013. (Chapter V, pp. 82-87.)

6. The study has established, for the Protestant Church School groups fifteen, sixteen, and seventeen years of age, quartile and median norms for each part of the test and for the test as a whole, with similar tentative norms for high school pupils of the same ages. (Chapter V, pp. 87, 88.)

APPENDIX

DIRECTIONS TO JUDGES FOR THE SCALING OF STATEMENTS IN PART III

(A copy of Part III as used in the test, together with the statements upon separate slips, was sent with these directions.)

We are trying to arrange, upon a scale, a series of statements ranging from complete distrust, through neutral, to complete trust in God. Will you help us by doing two things?

1. Go through the statements as they are given on the mimeographed pages. Ask yourself this question about each: If this should be checked by a high school boy or girl, indicating that he or she feels very strongly that the statement is true, how reliable would that reaction be as indicating distrust, neutrality, or trust in God?

If you think that it would be highly reliable, put A in the space following the statement.

If you think that it would probably be reliable, use B.

If you are doubtful about the reliability of the reaction, use C.

If in your judgment there would be no reliability whatever, use D.

In making these judgments, please draw upon your own experience with high school groups.

2. After you have given your judgment regarding the reliability of each of these statements, go through the statements as they are printed on the slips and arrange them in piles on a scale, running from complete distrust in both the power and the love of God, at one end, to complete trust in both the power and the love of God, at the other.

This is to be a 7-point scale running from 0 to 6. It will probably help you if you lay out such a scale upon the table, marking one end 0, complete distrust in God; the other end 6, complete trust in God; and the mid-point 3 as the neutral point where both distrust and trust are lacking. There will then be two points between 0 and 3 and two between 3 and 6, as follows:

0	1	2	3	4	5	6
Complete Distrust in Both the Power and the Love of God			Neutral, Lacking Both Trust and Distrust			Complete Trust in Both the Power and the Love of God

With this scale laid out before you, please take each statement as carded and ask yourself, "If a high school boy or girl checks this statement as one which he very strongly feels to be true, where on the scale of trust in God, just laid out, shall I place him?" Please do not attempt to distinguish halfway points between any of these scale points. Place the slip upon the scale point which seems to you to represent most nearly the position of the individual who checked the statement.

After you have scaled all the statements, please number all the slips in each pile with the number of the pile; that is, all the slips at 0, number 0; all at 1, number 1; and so on.

Then return the slips, together with the mimeographed copy giving your judgment regarding the reliability of the statements, in the envelope provided.

TRANSMUTATION CHARTS FOR SCORING

PART II. PERCENTAGE CHART FOR TRANSMUTING RAW SCORES INTO PER CENT SCORES ALLOWING FOR ITEMS CROSSED OFF

Score	No Blank	1 Blank	2 Blanks	3 Blanks	4 Blanks	5 Blanks	6 Blanks
24	100						
23	96						
22	92	100					
21	88	96					
20	83	91	100				
19	79	86	95				
18	75	82	90	100			
17	71	77	85	94			
16	66	73	80	89	100		
15	62	68	75	83	94		
14	58	64	70	78	87	100	
13	54	59	65	72	81	93	
12	50	55	60	67	74	86	100
11	46	50	55	61	68	79	92
10	42	47	50	56	62	72	84
9	37	41	45	50	56	64	75
8	33	38	40	46	50	57	67
7	29	32	35	39	44	50	58
6						43	42
5						36	33
4						30	25
3							16
2							

PART III. PERCENTAGE CHART FOR TRANSMUTING RAW SCORE INTO PER CENT SCORE

5	%	4	%	3	%	2	%	1	%	0	%
5.9		4.9	84	3.9	66	2.9	48	1.9	30	.9	12
5.8	100	4.8	82	3.8	64	2.8	47	1.8	28	.8	11
5.7	98	4.7	80	3.7	62	2.7	45	1.7	27	.7	9
5.6	97	4.6	78	3.6	61	2.6	43	1.6	25	.6	7
5.5	95	4.5	77	3.5	59	2.5	41	1.5	23	.5	5
5.4	94	4.4	75	3.4	57	2.4	39	1.4	22	.4	3
5.3	92	4.3	73	3.3	55	2.3	37	1.3	20	.3	2
5.2	90	4.2	72	3.2	53	2.2	36	1.2	18	.2	0
5.1	88	4.1	70	3.1	52	2.1	34	1.1	16	.1	
5.0	86	4.0	68	3.0	50	2.0	32	1.0	14	0	

The *raw score* on Part III is the *average* of the values of the items checked. Change this to the *per cent score* by using the above table.

PART IV. PERCENTAGE CHART FOR TRANSMUTING RAW SCORES INTO PER CENT SCORES ALLOWING FOR ITEMS CROSSED OFF

Raw	No Blank	1 Bl	2 Bl	3 B	4 B	5 B	6 B	7 B
205	100							
200		100						
195			100					
190	93	95	97	100				
189	93	95	97	99				
188	92	94	96	99				
187	91	94	96	98				
186	91	93	95	98				
185	90	93	95	97	100			
184	90	92	94	97	99			
183	89	92	94	96	99			
182	89	91	93	96	98			
181	88	91	93	95	98			
180	88	90	92	95	97	100		
179	87	90	92	94	97	99		
178	87	89	91	94	96	99		
177	86	89	91	93	96	98		
176	86	88	90	93	95	98		
175	85	88	90	92	95	97	100	
174	85	87	89	92	94	97	99	
173	84	87	89	91	94	96	99	
172	84	86	88	91	93	96	98	
171	83	86	88	90	92	95	98	
170	83	85	87	89	92	94	97	100
169	82	85	87	89	91	94	97	99
168	82	84	86	88	91	93	96	99

Raw	No Blank	1 B	2 B	3 B	4 B	5 B	6 B	7 B	8 B	9 B	10 B
167	81	84	86	90	90	93	95	98			
166	81	83	85	87	90	92	95	98			
165	80	83	85	87	89	92	94	97	100		
164	80	82	84	86	89	91	94	96	99		
163	79	82	84	86	88	91	93	96	99		
162	79	81	83	85	88	90	93	95	98		
161	78	81	83	85	87	89	92	95	98		
160	78	80	82	84	86	89	91	94	97	100	
159	77	80	82	84	86	88	91	94	96	99	
158	77	79	81	83	85	88	90	93	96	99	
157	76	79	81	83	85	87	90	92	95	98	
156	76	78	80	82	84	87	89	92	95	98	
155	75	78	80	82	84	86	89	91	94	97	100
154	75	77	79	81	83	86	88	91	93	96	99
153	74	77	79	81	83	85	87	90	93	96	99
152	74	76	78	80	82	84	87	89	92	95	98
151	73	76	78	79	82	84	86	89	92	94	97
150	73	75	77	79	81	83	86	88	91	94	97
149	72	75	77	78	81	83	85	88	90	93	96
148	72	74	76	78	80	82	85	87	90	93	95
147	71	74	75	77	79	82	84	86	89	92	95
146	71	73	75	76	79	81	83	86	88	91	94
145	70	73	74	76	78	81	83	85	88	91	94
144	70	72	74	76	78	80	82	85	87	90	93
143	69	72	73	75	77	79	82	84	87	89	92
142	69	71	73	75	77	79	81	84	86	89	92
141	68	71	72	74	76	78	81	83	85	88	91
140	68	70	72	74	76	78	80	82	85	88	90
139	67	70	71	73	75	77	79	82	84	87	90
138	67	69	71	73	75	77	79	81	84	86	89
137	66	69	70	72	74	76	78	81	83	86	88
136	66	68	70	72	74	76	78	80	82	85	88
135	65	68	69	71	73	75	77	79	82	84	87
134	65	67	69	71	72	74	77	79	81	84	86
133	64	67	68	70	72	74	76	78	81	83	86
132	64	66	68	69	71	73	75	78	80	83	85
131	63	66	67	69	71	73	75	77	79	82	85
130	63	65	67	68	70	72	74	76	79	81	84
129	62	65	66	68	70				78		84
128	62	64	66	67	69				78		83
127	61	64	65	67	69				77		83
126	61	63	65	66	68				77		82
125	60	63	64	66	68				76		82
124	60	62	64	65	67				76		81
123	59	62		65	67				75		81
122	59	61		64	66				75		80
121	58	61		64	66						80
120	58	60		63	65						79
119	57	60		63	65						79
118	57	59		62	64						78
117	56	59		62	64						78
116	56	58		61	63						77
115	55	58		61	63						77
114	55	57			62						76

FAITH IN GOD AMONG HIGH SCHOOL STUDENTS

Preliminary Form

Please fill in all the blanks below. It is not necessary to give your name on this test unless you are especially asked to do so. However, be sure to give the other information.

Boy or girl.....Date of this test.....

Age last birthday.....Date of your birthday.....

Name of your city or town.....State.....

Check the word that tells the kind of school you are now attending.

Public ( ) Private ( ) Parochial ( )

What school grade are you now in?.....

How often do you attend Sunday School now? Check the word that applies to you.

Habitually ( ) Usually ( ) Occasionally ( ) Seldom ( ) Never ( )

About how many years have you attended Sunday School?.....

What department of the Sunday School are you now in? Check the word that applies to you.

Intermediate ( ) Senior ( ) Young People's ( )

How often do you attend church now? Check the word that applies to you.

Habitually ( ) Usually ( ) Occasionally ( ) Seldom ( ) Never ( )

How many years have you attended church?.....

Before entering high school ( ).....Since entering high school ( )

Did you attend church during the following age periods? Check.

1-5 yrs. ( ) 6-10 yrs. ( ) 11-15 yrs. ( ) 16-20 yrs. ( )

Of what denomination are you a member?.....

Name.....

Address.....

Issued for experimentation by the Department of Educational Research, 820 Witherspoon Building, Philadelphia, Pennsylvania.

Copyright, 1929, by Harold I. Donnelly.

FAITH IN GOD

PART I

Moral and Religious Terms

Directions (please follow carefully):

You are asked to give the meaning of the words in the following list. Please read each line and check (√) the word in the second group which means the same or most nearly the same as the word at the beginning of the line. For example:

truth means regard ( ), bad ( ), attention ( ), sincerity (√)

In the above line sincerity is the word which is closest in meaning to truth, therefore it is checked. Follow this plan for each group of words. Work rapidly but carefully. If you are not sure what a word means, check the word you think is right and go on to the next.

1. infinite means	human ( ), unlimited ( ), bad ( ), good ( )
2. a being means	sincerity ( ), person ( ), upright ( ), accident ( )
3. reality means	strength ( ), fondness ( ), reaction ( ), fact ( )
4. faith means	health ( ), belief ( ), joy ( ), failure ( )
5. trust means	like ( ), try ( ), reliance ( ), purity ( )
6. confidence means	intensity ( ), confession ( ), assurance ( ), break ( )
7. individual means	many ( ), help ( ), insulation ( ), one ( )
8. distrust means	disobey ( ), suspect ( ), praise ( ), change ( )
9. fear means	weakness ( ), faint ( ), defeat ( ), dread ( )
10. spirit means	loyalty ( ), respect ( ), narrow ( ), soul ( )
11. law means	monarchy ( ), regulation ( ), court ( ), loan ( )
12. pessimism means	anger ( ), hopelessness ( ), charity ( ), sorrow ( )
13. creator means	evasion ( ), maker ( ), loss ( ), follower ( )
14. love means	glove ( ), flattery ( ), enemy ( ), affection ( )
15. right means	clean ( ), smart ( ), painful ( ), correct ( )
16. hate means	envy ( ), abhor ( ), conceit ( ), hot ( )
17. power means	goodness ( ), strength ( ), satisfaction ( ), practice ( )
18. wrong means	frail ( ), dislike ( ), poor ( ), incorrect ( )
19. justice means	kindness ( ), foe ( ), airs ( ), fairness ( )
20. virtue means	goodness ( ), cold ( ), soberness ( ), peace ( )
21. honesty means	honor ( ), action ( ), truthfulness ( ), directions ( )
22. force means	impertinence ( ), energy ( ), innocence ( ), represent ( )
23. optimism means	fear ( ), anger ( ), stubbornness ( ), hope ( )
24. kindness means	favoritism ( ), good will ( ), success ( ), knowledge ( )
25. impersonal means	without honor ( ), not personal ( ), unlimited ( ), true ( )
26. belief means	burden ( ), idea ( ), conviction ( ), freedom ( )
27. ruler means	occasion ( ), teacher ( ), helper ( ), governor ( )
28. wisdom means	defense ( ), writer ( ), effort ( ), sagacity ( )
29. holiness means	worthiness ( ), sanctity ( ), satisfaction ( ), help ( )
30. eternal means	limited ( ), proper ( ), usually ( ), perpetual ( )

FAITH IN GOD

PART II

General Questions

Directions (please follow carefully):

The following questions have to do with certain beliefs, attitudes, practices, and habits that are of a general nature. Please answer each by checking (√) or by writing brief statements or by doing both. If you do not understand the meaning of a question, cross out the number and go on to the next. Do your best to answer every question as fairly and as completely as you can. This will probably mean that you will check more than one item in certain cases.

1. On what basis are you choosing your friends? a. Their need for your help ( ); b. Their ability to help you ( ); c. Personal satisfaction ( ); d. Social position ( ); e. Race feeling ( ); f. Mere liking ( ); g. Chance ( ).
2. What work, occupation, or profession do you most want to enter?
3. On what basis are you choosing your life occupation? a. Service ( ); b. Salary ( ); c. Social position ( ); d. God's will for your life ( ); e. Interesting work ( ); f. Easy work ( ); g. Personal ability ( ).
4. Are you hopeful and confident when you think of your future career? Yes ( ); No ( ).

Check each of the following that enters into your confidence or lack of confidence.

a. Encouraged by others ( );
b. Discouraged by others ( );
c. Personal ability ( );
d. Lack of personal ability ( );
e. Favorable financial circumstances ( );
f. Unfavorable financial circumstances ( );
g. Favorable home conditions ( );
h. Unfavorable home conditions ( );
i. Trust in divine help ( );
j. Lack of trust in divine help ( );
k. Success in things already tried ( );
l. Lack of success in things already tried ( );
m. Right kind of education ( );
n. Lack of right kind of education ( );
o. Friends who will always help ( );
p. Lack of friends who will always help ( ).

5. Which of the following items do you fear very much?
   a. Failure ( ); b. Disappointing family and friends ( ); c. Unpopularity ( ); d. Doing wrong ( ); e. Death ( ); f. God ( ); g. Parents ( ); h. School examinations ( ); i. Doing something new ( ); j. Doing something hard ( ); k. Nothing ( ).
6. Where did you get your idea of God? a. Parents ( ); b. Church ( ); c. Sunday School ( ); d. School ( ); e. Friends ( ); f. Personal reading of the Bible ( ); g. Other reading ( ); h. Personal experience of God ( ); i. Thinking for yourself ( ).
7. Has your idea of God changed during the last five years? a. Very much ( ); b. Somewhat ( ); c. Not at all ( ).
   Does your present idea of God satisfy you? a. Completely ( ); b. Very well ( ); c. Somewhat ( ); d. Not at all ( ).
8. Do you ever feel that God is present with you? a. Always ( ); b. Very often ( ); c. Occasionally ( ); d. Never ( ).
   Name one or more occasions when God seemed very near.

9. How often do you pray to God? A. When you are alone: a. Regularly, at a definite time ( ); b. Very often ( ); c. Occasionally ( ); d. Never ( ).
B. With the family at home: a. Regularly ( ); b. Very often ( ); c. Occasionally ( ); d. Never ( ).
C. Publicly, in meetings: a. Regularly ( ); b. Very often ( ); c. Occasionally ( ); d. Never ( ).
10. Do you attend church? Yes ( ); No ( ).
If you attend church, which of the following items are reasons why you attend? a. To learn about God ( ); b. Duty as a church member ( ); c. To worship God ( ); d. To know more about the Bible ( ); e. Habit ( ); f. Parents want me to ( ); g. Help from sermons ( ); h. Proper thing to do ( ); i. Help from the service ( ); j. Fellowship with others ( );k. Beauty of the service ( ); l. Fellowship with God ( ); m. Influence upon others ( ); n. Sharing in the sacraments ( ).
If you do not attend church, which of the following items are reasons why you do not attend? a. Sermon too long ( ); b. Do not know what the service is all about ( ); c. Too many hypocrites in the church ( ); d. Do not like the minister ( ); e. Church is too narrow ( ); f. Church is not up-to-date ( ); g. Sermons uninteresting ( ); h. Have never attended ( ); i. Not interested in the church ( ); j. Was forced to attend so long that I have no interest now ( ); k. Parents do not attend ( ); l. Friends do not attend ( ); m. Do not like the form of service ( ); n. Religious disagreements at home ( ); o. Breaking down of faith in God ( ).
11. How do you think of Jesus? a. God's Son ( ); b. Saviour ( ); c. One who came to forgive sins ( ); d. One who heals the sick ( ); e. One who helps the weak ( ); f. Shepherd of sheep ( ); g. Historical figure ( ); h. Myth ( ); i. Great prophet or teacher ( ); j. Ideal man, our example ( ); k. Kind and good man ( ); l. Great teacher ( ); m. Representative of God on earth ( ); n. Same as God ( ); o. Lord and Master ( ).
12. How do you try to keep from doing wrong? a. Try to find out what is right to do ( ); b. Make an effort to do right ( ); c. Try not to do wrong ( ); d. Ask God for help ( ); e. Ask parents for help ( ); f. Think of example and teachings of Jesus ( ); g. Think of what will happen if I do wrong ( ); h. Try to realize disappointment to family and friends ( ); i. Think of possible disappointment to myself because of failure to live up to my ideals ( ); j. Do easiest thing regardless of whether it is right or wrong ( ); k. Do nothing ( ).
13. A. When you have done wrong do you feel that you have sinned against God? a. Always ( ); b. Usually ( ); c. Sometimes ( ); d. Never. ( ).
B. How far do you feel God forgives sin? a. Completely ( ); b. Partially( ); c. Not at all ( ).
C. What does his forgiveness mean to you? a. Responsibility not to repeat sin ( ); b. A chance to start over ( ); c. Relief from worry ( ); d. Chance to shift responsibility for your actions ( ); e. Nothing ( ).
14. In times of crisis, when you are in need of help, to whom do you go? a. Father ( ); b. Mother ( ); c. Brothers ( ); d. Sisters ( ); e. Friends ( ); f. God ( ); g. School-teacher ( ); h. Sunday School teacher ( ); i. Pastor ( ); j. No one ( ).
15. A. Do you have ideals for your daily living? a. Definite ( ); b. Vague ( ); c. None ( ).
B. If you have ideals, how far do you think you are living up to them? a. Very well ( ); b. Fairly well ( ); c. Somewhat ( ); d.

Not at all ( ). C. How far are these ideals influenced by your faith in God? a. Very much ( ); b. Somewhat ( ); c. Not at all ( ).

16. How do you think of the Bible? Check each of the following items which you would include in your answer: a. Interesting book ( ); b. Word of God ( ); c. History ( ); d. Mythology ( ); e. Guide to conduct ( ); f. Good literature ( ); g. Truths about human problems ( ); h. Prophecy ( ); i. Teachings about God ( ); j. Source of help in time of trouble ( ); k. Record of God's works ( ); l. Holy book ( ); m. Full of exaggerations and inconsistencies ( ).
17. Add here any other beliefs, attitudes, practices, or habits that you think should be included in this list. Check as in the above statements.
18. In what ways not included in the list above does your faith in God have a direct influence upon your thinking or your habits?

FAITH IN GOD

PART III

How Much Do You Trust God?

Directions (please follow carefully):

The statements below include various feelings of trust or distrust in God. Please place a check (✓) after each statement which you feel very strongly to be true. Be as honest as you can. If you do not understand the meaning of a statement, cross out the number and go on to the next. Work rapidly but carefully.

No matter what you believe about God or how you feel toward him, there will probably be some statements which you can honestly check and some which you cannot check. Remember to **check only those statements which you feel very strongly to be true.**

1. Sometimes I feel that God really helps me, but at other times he seems to have entirely forgotten me.
2. I am sure that God is ready to receive me if I will give myself to him.
3. God gives me real help to meet the moral problems of my life.
4. My confidence in God has come from my own experience and is a strong influence in my life.
5. I feel sure of God's power and love and have come to have complete faith in him.
6. God's will for me is the primary guiding influence in my life.
7. I feel that God does not have any real power over the life of an individual.
8. Complete confidence in God helps us to make the most of ourselves.
9. I feel that if God really loved us he would use his power to put sin and suffering out of the world.
10. I am sure that God hears my prayers and answers them in the way that is best for me.
11. God is my heavenly Father who is interested in me and is always ready to help me.
12. I feel sure that God usually does not pay any attention to my prayers.
13. I am afraid of God when I do wrong.
14. I feel that I can always depend upon God, for God is the unchanging law of nature.
15. I rely upon God for help in making great decisions.
16. I am always afraid of God when I think about him.
17. I am sure that God takes care of each one who loves him.
18. I cannot trust God for he is too far away from the world to be interested in human needs.

19. I am willing to do whatever God wants me to do.
20. I am uncertain about trusting God for I am not sure that I am really one of his children.
21. I depend upon God to supply my daily needs.
22. I feel that now I can never trust God for he has not given me a fair chance in life.
23. I distrust God because he is always watching to catch me doing something wrong.
24. God hates people who do wrong.
25. God is so indefinite in my mind that I find trust in him is impossible.
26. I feel sure that God has a plan for my life and that he will help me to find out what it is.
27. My knowledge of science has made it impossible for me to trust in God.
28. I do not depend upon God for help of any kind.
29. God, living in me, makes it possible for me to do anything.
30. When I do wrong I feel that God is sorry but that he still loves me.
31. God is worthy of my highest respect and confidence.
32. Trust in God is all right for the weak and ignorant but is not necessary for those who are strong.
33. I feel that I cannot trust God since I do not and cannot know anything about him.
34. God sometimes makes people who do not love him believe things that are not so.
35. Although God does not always do what I want, I feel that he always does what is best for me.
36. God has seemed so often powerless and unfair that I distrust him completely.
37. God is such a stern judge that I am frightened when I think of dying.
38. God always seems to be on the side of the strong and powerful.
39. I feel that faith in God will not do anyone any harm.
40. I have no faith at all in God.
41. I feel that a man cannot be honest in his thinking and still put any trust in God.
42. My experience with people who are religious makes me feel that trusting God is bad for people.
43. I feel that God is worthy of the respect and confidence of all my friends.
44. Trusting in God and trying to do his will takes all the joy out of life.
45. I feel unable to attack my major problems without God's help.
46. God does not try to help man but demands absolute obedience to his laws.
47. Trusting in God is foolish since everything happens either by chance or in accord with natural law neither of which can be changed by anyone.
48. I feel that God has very little power over the forces of nature and that he does not really care for mankind.
49. My time to die is definitely fixed and when that time comes I shall die and nothing I can do —neither praying nor anything else—will change this time.
50. I feel that I trust God only because my parents have taught me to do so and not because I really want to.

The following is a scale of trust and distrust in God. Please place a check (√) at the point which most nearly represents what you think is the strength or weakness of your trust in God.

Example:

Complete Distrust in Both the Power and the Love of God	Neutral, Lacking Both Trust and Distrust	Complete Trust in Both the Power and the Love of God

The scale checked as above indicates complete trust in God.

SCALE

Complete Distrust in Both the Power and the Love of God	Neutral, Lacking Both Trust and Distrust	Complete Trust in Both the Power and the Love of God

FAITH IN GOD

Part IV

What Do You Believe About God?

Directions (please follow carefully):

The questions below include various forms of belief about God. Answer each as honestly as you can. Place a check (√) in the column which most nearly represents your own belief as follows:

	No Very Strongly	No	Not Certain	Yes Very Strongly
If you are very positive that you do **not** believe the statement, check in the first column.				
If you do **not** believe the statement, but are **not positive,** check in the second column.				
If you are **uncertain** whether or not you believe it, check in the third column.				
If you **do** believe the statement, check in the fourth column.				
If you **believe** the statement **very positively,** check in the fifth column.				

Please check **every** question. If you do not understand the meaning of a question, cross out the number and go on to the next. Work rapidly but carefully.

	No Very Strongly	No	Not Certain	Yes	Yes Very Strongly
1. Do you believe that God is everywhere, knows everything, and can do all things?					
2. Do you believe that God is not a person but is an impersonal force that operates in accord with the laws of nature?					

	No Very Strongly	No	Not Certain	Yes	Yes Very Strongly
3. Do you believe that God is a loving Father?					
4. Do you believe that God is working with us to make the world better?					
5. Do you believe that God is but another name given for the laws of nature?					
6. Do you believe that God will set aside the laws of nature, such as those governing rain, in order to please you or your group?					
7. Do you believe that God is merely the most wonderful man that ever lived?					
8. Do you believe that God provides food, clothing, shelter, and for all your daily needs?					
9. Do you believe that it is impossible to know anything at all about God?					
10. Do you believe that God is so kind that he will not punish anyone?					
11. Do you believe that God is merely a beautiful thought to help us to live better?					
12. Do you believe that God is interested in you as an individual?					
13. Do you believe that God eventually rewards all those who do right and punishes all those who do wrong?					
14. Do you believe that God is a being who looks like a man but is greater and nobler?					
15. Do you believe that God is unkind because he allows pain and suffering?					
16. Do you believe that God is far off, outside the world, and that therefore you cannot reach him?					
17. Do you believe that God is merely an idea that has grown up out of man's imagination to help him to explain things which he does not understand?					
18. Do you believe that God is the Creator and Ruler of the world?					
19. Do you believe that there is no God of any kind?					
20. Do you believe that God has complete and absolute power over everything?					
21. Do you believe that God has power to keep you from doing what is wrong?					
22. Do you believe that God is unjust because he allows grafters to become rich?					
23. Do you believe that God helps only those who are trying to help themselves?					
24. Do you believe in one God who is God the Father, God the Son, and God the Holy Spirit?					

	No Very Strongly	No	Not Certain	Yes	Yes Very Strongly
25. Do you believe that God holds you responsible for everything you do?					
26. Do you believe that God is a person whom everyone can trust?					
27. Do you believe that God can be reached with equal ease by every individual and in every place?					
28. Do you believe that God is always ready and anxious to have fellowship with individuals?					
29. Do you believe that God is an infinite Spirit, wise, loving, just, and powerful?					
30. Do you believe that God has nothing at all to do with your life?					
31. Do you believe that God is the friend of everyone who has faith in him?					
32. Do you believe that God is the inspirer of great art and literature?					
33. Do you believe that everything is God and God is the only reality?					
34. Do you believe that God really revealed himself to us through Jesus Christ?					
35. Do you believe that God really reveals himself to us through nature?					
36. Do you believe that God is one being and there is but one such being?					
37. Do you believe that through faith you can have an experience of God quite as real in its way as your experience with an earthly friend?					
38. Do you believe that God is still at work in the world?					
39. Do you believe that God is the father only of certain individuals or groups and that he is not the father of all mankind?					
40. Do you think that your answers to the preceding questions in this part of the test give a complete and true picture of your belief about God?					
41. If you do not feel that your answers give a complete record of your belief, what else do you believe about God? Add below anything else you believe and check each of your statements in the proper column.					

STATEMENT TO BOY OR GIRL USING SUPPLEMENTARY BLANKS

Now that you have answered the questions and checked the statements about your faith in God, will you please do one other thing? We need very much to know how good this material is. You can help us by handing the attached papers to one of your parents and to one other individual who knows

you very well. This will give their judgment about your trust in God in addition to the answers which you yourself have given.

Write your name on each one of the two blanks before you and hand them to your parent and friend. If for any reason you do not care to use your name, please use a number of at least six figures, which will identify the papers. This number should appear on your answers to the questions about faith in God and on each of the attached papers.

We appreciate your help very much.

This paper is being handed to you by:

.....

We would like your help in a very important study. The person named above has answered a series of questions about his faith in God. For our future use of these questions, we should like to know how nearly they come to giving a correct indication of trust in God. Please help us by filling in the information requested below. This information will be considered strictly confidential.

Your position and occupation.....

Your relationship to the person named above. Check.

Father ( ) Mother ( ) Guardian ( ) Teacher ( ) Sunday School teacher ( ) Pastor ( ) Club leader ( ) Friend ( )

Approximately how long have you had this relationship?.....

Approximately how long have you known the above person?.....

In how many ways are you associated with the person named above? Check.

At home ( ) At school ( ) At church ( ) In the Church School ( ) At play ( ) At work ( ) In club work ( )

How good a judge are you of the extent to which the person named above actually has trust in God? Check.

Very good ( ) Good ( ) Fair ( ) Poor ( )

Why do you think so?

By using a check mark, indicate on the following scale where you think the person named above stands as far as his trust in God is concerned.

Complete Distrust of God, Both of His Power and of His Love			Neutral, Lacking Both Distrust and Trust		Complete Trust in God, Both in his Power and in His Love

Your name and address, if you care to give it.

.....

.....

Please return in the attached envelope to the Department of Educational Research, 820 Witherspoon Building, Philadelphia, Pennsylvania.

RELIGIOUS DISCOVERY TEST

For High School Use

Experimental Form

The purpose of this discovery blank is to help you to find out what you think about certain important religious questions. This is not an ordinary test or examination upon which you will be marked as right or wrong. It is, rather, a discovery test to help you in your own thinking and living.

If it raises questions which trouble you, be sure to talk them over with some teacher or leader after you have finished the test.

Please fill in all the blanks below. It is not necessary to give your name on this test unless you are especially asked to do so. However, be sure to give all the other information.

Place where test is taken.....Date of this test.....
Boy or girl.....Nationality of your parents.....
Age your last birthday.....Date of your birthday.....
Name of your city or town.....State.....
Check size of your city or town:
City over 100,000 ( ) City under 100,000 ( ) Suburb ( ) Town ( ) Country ( )
Check the word that tells the kind of school you are now attending:
Public ( ) Private ( ) Parochial ( )
What school grade are you now in? If test is taken during summer months, state grade last attended.....
How often do you attend Sunday School now? Check the word that applies to you:
Habitually ( ) Usually ( ) Occasionally ( ) Seldom ( ) Never ( )
About how many years have you attended Sunday School?.....
What department of the Sunday School are you now in? Check the word that applies to you:
Intermediate ( ) Senior ( ) Young People's ( )
How often do you attend church now? Check the word that applies to you:
Habitually ( ) Usually ( ) Occasionally ( ) Seldom ( ) Never ( )
How many years have you attended church?.....
Did you attend church regularly during the following age periods? Check:
1-5 yrs. ( ) 6-10 yrs. ( ) 11-15 yrs. ( ) 16-20 yrs. ( )
Of what denomination are you a member?.....
If you are not a member of any Church, what is your denominational preference?
.....

Part I

What Do These Words Mean?

Directions (please read carefully):

Please give the meanings of the words in the following list. Read each line and check (√) the word or phrase in the second group which means the same or most nearly the same as the word at the beginning of the line.

Illustration:

eternal.....regard ( ) ball ( ) attention ( ) everlasting (√)

In the above line "everlasting" is the word which is closest in meaning to "eternal," therefore it is checked. Follow this plan for each group of words. Work rapidly but carefully. If you are not sure what a word means, check the word you think is right and go on to the next.

1. infinite.....human ( ) unlimited ( ) bounded ( ) good ( )
2. a being.....sincerity ( ) upright ( ) accident ( ) that which exists ( )
3. reality.....strength ( ) fondness ( ) reaction ( ) truth ( )
4. faith.....health ( ) belief ( ) joy ( ) failure ( )
5. trust.....like ( ) try ( ) dependence ( ) worth ( )
6. confidence.....intensity ( ) confession ( ) assurance ( ) break ( )

7. individual.....many ( ) help ( ) dual ( ) person ( )
8. distrust.....disobey ( ) doubt ( ) praise ( ) change ( )
9. spirit.....loyalty ( ) respect ( ) narrow ( ) soul ( )
10. law.....monarchy ( ) rule ( ) court ( ) loan ( )
11. creator.....evasion ( ) maker ( ) loss ( ) follower ( )
12. love.....glove ( ) flattery ( ) enemy ( ) affection ( )
13. right.....clean ( ) smart ( ) painful ( ) true ( )
14. power.....goodness ( ) authority ( ) satisfaction ( ) practice ( )
15. wrong.....frail ( ) dislike ( ) poor ( ) evil ( )
16. justice.....kindness ( ) foe ( ) airs ( ) fairness ( )
17. force.....impertinence ( ) power ( ) innocence ( ) honor ( )
18. impersonal.....without honor ( ) not personal ( ) unlimited ( ) true ( )
19. ruler.....occasion ( ) teacher ( ) helper ( ) governor ( )
20. wisdom.....defense ( ) writer ( ) effort ( ) discretion ( )
22. principle.....precept ( ) table ( ) complete ( ) foundation ( )
23. spiritual.....kind ( ) actual ( ) zealous ( ) not material ( )
24. universe.....converse ( ) eclipse ( ) utopia ( ) world ( )
25. absolute.....lenient ( ) comfortable ( ) mystery ( ) complete ( )
26. fellowship.....comradeship ( ) disappointment ( ) stewardship ( ) follower ( )
27. reveal.....to make known ( ) to conceal ( ) realize ( ) pleasure ( )
29. believe.....accept as true ( ) to question ( ) to rule ( ) disappoint ( )
30. substance.....material ( ) source ( ) softness ( ) sincerity ( )

Part II

What Helps in Your Decisions?

The following questions have to do with certain situations which many high school boys and girls are facing. As you read each question try to think of your own situation. Then check (√) each of the items listed in the columns which best give your answers. Here is an illustration:

How much do you fear each of these:	Very Much	Somewhat	Not at All
a. Failure	√		
b. Unpopularity		√	
c. Doing wrong			√

The person who checked the above answered the question by saying that he feared failure very much, and unpopularity somewhat, but that he was not at all afraid of doing wrong.

If you do not face the kind of situation described in the question, cross off the question and go on to the next. Face each question frankly and answer it as honestly as you can. Please check each item in one of the three columns.

Check (√) each item in the column which best gives your answer.	Very Much	Some-what	Not at All
1. In trying to choose your life occupation, how much do you consider each of these:			
a. Service			
b. Salary			
c. Social position			
d. God's will for your life			
e. Injury to others			
f. Easy work			
g. Parents' wishes			
h. Your own fitness			
i. Hard, but important work			
2. In choosing your life occupation, if you want to do one thing and your parents want you to do something else, how much are you being influenced by:			
a. Loyalty to your parents			
b. Suggestions of your crowd			
c. Desire to do God's will			
d. Your own pleasure			
e. Desire to get away from home			
f. Feeling your parents know best			
g. Feeling you yourself know best			
3. If you are confident of being a success in your chosen occupation, how much are you depending upon:			
a. Personal ability			
b. Favorable financial circumstances			
c. Trust in God's help			
d. Success in things already tried			
e. Right kind of education			
f. Friends who will help			
g. Good luck			
h. Favorable home conditions			
i. Encouragement of others			
4. If you attend church, how much are you influenced to attend by each of these reasons:			
a. To learn about God			
b. Duty as a church member			
c. To have fellowship with God			
d. Habit			
e. Parents want you to			
f. Approval of others			
g. Fellowship with others			
h. Beauty of the service			
i. Your influence upon others			
j. To know more about the Bible			
5. In deciding how you should act toward your best friend of the other sex, how much are you influenced by:			
a. What he or she wants to do			
b. Your own pleasure			
c. What your crowd does			

Check (√) each item in the column which best gives your answer.	Very Much	Some-what	Not at All
d. What God wants you to do			
e. Your parents' wishes			
f. Laws or codes of Scout, Camp Fire, and such organizations			
g. Religious teachings			
Check each item on the right, in the column which best gives your answer.	**Very Often**	**Some-times**	**Never**
6. When you are trying to keep from doing wrong, how often do you do each of these things:			
a. Try to find out what is right to do			
b. Ask God for help			
c. Ask parents for help			
d. Think of example and teachings of Jesus			
e. Try to realize the disappointment to your family and friends			
f. Think of possible disappointment to yourself because of your failure to live up to your ideals			
g. Do easiest thing regardless of whether it is right or wrong			
h. Do wrong if it gives you pleasure			
7. When your crowd does something you know is wrong, how often do you do:			
a. What your crowd does			
b. What your parents want			
c. What you think God would like			
d. What your best friend advises			
e. What older people expect you to do			
f. What your crowd does not do			
8. In times of crisis, when you are in need of help, how often do you go to each of these individuals:			
a. Father			
b. Mother			
c. Brothers			
d. Sisters			
e. Friends			
f. God			
g. School-teacher			
h. Sunday School teacher			
i. Pastor			
9. When you have done wrong, how often do you feel that you have:			
a. Disappointed your family			
b. Lowered your own standards of living			
c. Made yourself popular with your crowd			
d. Sinned against God			
e. Made it easier to sin again			
f. Satisfied your own desires			

Check each item on the right, in the column which best gives your answer.	Very Often	Some-times	Never
10. When you are happy, how often do you feel that:			
a. You have earned happiness yourself			
b. You want others to be happy			
c. You do not deserve happiness			
d. You have gained happiness at the expense of some one else			
e. You want to thank God			
11. When you want to go out nights and your family does not want you to, how often are you influenced by:			
a. Parents' wishes			
b. What your crowd wants you to do			
c. Your own wishes			
d. Your own welfare			
e. What God wants you to do			
f. Popularity which would be lost or gained			
12. When you are discouraged, how often do you do each of these things:			
a. Work hard in spite of discouragement			
b. Sit back and wait for your luck to take a new turn			
c. Brood over your own misfortunes			
d. Pray to God for help			
e. Ask friends for help			
f. Try to forget it			

Part III

How Much Do You Trust God?

Directions (please follow carefully):

The statements below include various feelings of trust or distrust in God. Please place a check (✓) after each statement which you feel very strongly to be true. Be as honest as you can. If you do not understand the meaning of a statement, cross off the question and go on to the next. Work rapidly but carefully.

No matter what you believe about God or how you feel toward him, there will probably be some statements which you can honestly check and some which you cannot check. Remember to **check only those statements which you feel very strongly to be true.**

1. Sometimes I feel that God really helps me, but at other times he seems to have entirely forgotten me.
2. God gives me real help to meet the moral problems of my life.
3. I feel sure of God's power and love and have come to have complete faith in him.
4. I feel that God does not have any real power over the life of an individual.
5. I feel that if God really loves us he would use his power to put sin and suffering out of the world.
6. I am sure that God is ready to receive me if I will give myself to him.
7. My confidence in God has come from my own experience and is a strong influence in my life.
8. God's will for me is the primary guiding influence in my life.
9. Complete confidence in God helps us to make the most of ourselves.
10. I am sure that God hears my prayers and answers them in the way that is best for me.
11. God is my heavenly Father who is interested in me and is always ready to help me.
12. I rely upon God for help in making great decisions.
13. I am sure that God takes care of each one who loves him.
14. I am willing to do whatever God wants me to do.
15. I depend upon God to supply my daily needs.
16. I distrust God because he is always watching to catch me doing something wrong.
17. I feel sure that God usually does not pay any attention to my prayers.
18. I feel that I can always depend upon God, for God is the unchanging law of nature.
19. I cannot trust God, for he is too far away from the world to be interested in human needs.
20. I am uncertain about trusting God, for I am not sure that I am really one of his children.
21. I feel that now I can never trust God, for he has not given me a fair chance in life.
22. God hates people who do wrong.
23. My knowledge of science has made it impossible for me to trust in God.
24. God, living in me, makes it possible for me to do anything.
25. God is worthy of my highest respect and confidence.
26. Although God does not always do what I want, I feel that he always does what is best for me.
27. God is such a stern judge that I am frightened when I think of dying.
28. I feel that faith in God will not do anyone any harm.
29. I feel sure that God has a plan for my life and that he will help me to find out what it is.

30. When I do wrong I feel that God is sorry, but that he still loves me.
31. Trust in God is all right for the weak and ignorant, but is not necessary for those who are strong.
32. God has seemed so often powerless and unfair that I distrust him completely.
33. God always seems to be on the side of the strong and powerful.
34. I have no faith at all in God.
35. I feel that a man cannot be honest in his thinking and still put any trust in God.
36. I feel that God is worthy of the respect and confidence of all my friends.
37. I feel unable to attack my major problems without God's help.
38. Trusting in God is foolish, since everything happens either by chance or in accord with natural law, neither of which can be changed by anyone.
39. My experience with people who are religious makes me feel that trusting God is bad for people.
40. I feel that God has very little power over the forces of nature and that he does not really care for mankind.
41. God loves me, but cannot do much to help me because of the unchanging laws of nature.
42. Trusting in God is all right for those who are not strong enough to help themselves.
43. God usually helps me when I need him, but sometimes he does not.
44. God could help me if he really loved me.
45. God feels happy when I work hard and do what is right.
46. I cannot see how trusting in God makes any difference either one way or another.
47. I feel that God probably would help me if I had enough confidence in him.
48. God takes care of me by seeing that I have food, clothing, and shelter.
49. God may love me, but he does not help me very much.
50. Everyone who trusts the laws of nature trusts God.

The following is a scale of trust and distrust in God. Please place a check (√) at the point which most nearly represents what you think is the strength or weakness of your trust in God.

Example:

Complete Distrust in Both the Power and the Love of God			Neutral, Lacking Both Trust and Distrust			Complete Trust in Both the Power and the Love of God
			√			

The scale checked as above indicates neither trust nor distrust in God.

SCALE YOURSELF HERE:

Complete Distrust in Both the Power and the Love of God			Neutral, Lacking Both Trust and Distrust			Complete Trust in Both the Power and the Love of God

Part IV

What Do You Believe About God?

Directions (please follow carefully):

The questions below include various forms of belief about God. Answer each as honestly as you can. Place a check (√) in the column which most nearly represents your own belief as follows:

	No Very Strongly	No	Not Certain	Yes	Yes Very Strongly
If you are very positive that you do **not** believe the statement, check in the first column.	√				
If you do **not** believe the statement, but are **not positive,** check in the second column.		√			
If you are **uncertain** whether or not you believe it, check in the third column.			√		
If you **do** believe the statement, check in the fourth column.				√	
If you **believe** the statement **very positively,** check in the fifth column.					√

Please check **every** question. If you do not understand the meaning of a question, cross off the question and go on to the next. Work rapidly but carefully.

Place a check (√) in column which most nearly represents your own belief.	No Very Strongly	No	Not Certain	Yes	Yes Very Strongly
1. Do you believe that God is a loving Father?					
2. Do you believe that God is working through us to make the world better?					
3. Do you believe that God is present everywhere?					
4. Do you believe that God knows everything, that he has all wisdom?					
5. Do you believe that God is not a person but is an impersonal force that follows the laws of nature in the way it works?					
6. Do you believe that God is but another name given for the laws of nature?					
7. Do you believe that God will set aside the laws of nature, such as those governing rain, in order to please you or your group?					
8. Do you believe that God is impersonal substance, existing in and through but above and beyond our universe?					
9. Do you believe that God is the impersonal moral law of the universe, the principle of justice at the heart of everything?					
10. Do you believe that it is impossible to know anything at all about God?					

Place a check (√) in column which most nearly represents your own belief,	No Very Strongly	No	Not Certain	Yes	Yes Very Strongly
11. Do you believe that God is a name for the impersonal spiritual laws of the universe, which are alive and which operate themselves?					
12. Do you believe that God is interested in you as an individual?					
13. Do you believe that God is so kind that he will not punish anyone?					
14. Do you believe that God is merely a beautiful thought to help us to live better?					
15. Do you believe that the world is governed by many gods, each with its own special responsibilities?					
16. Do you believe that God is a man, the most wonderful man that ever lived?					
17. Do you believe that God is unkind because he allows pain and suffering?					
18. Do you believe that God is far off, outside the world, and that therefore you cannot reach him?					
19. Do you believe that God is merely an idea that has grown up out of man's imagination to help us to explain things which we do not understand?					
20. Do you believe that God is the Creator of the world?					
21. Do you believe that God is an old man with a long white beard?					
22. Do you believe that God is the Ruler of the world, controlling everything that happens?					
23. Do you believe that God has complete and absolute power over everything?					
24. Do you believe that there is no God of any kind?					
25. Do you believe that the world is filled with many spirits which have a real influence upon our living?					
26. Do you believe in one God who is three persons, God the Father, God the Son, and God the Holy Spirit?					
27. Do you believe that God is willing to help only those who are trying to help themselves?					
28. Do you believe that God is unjust because he allows some grafters to become rich?					
29. Do you believe that God holds you responsible for everything you do?					
30. Do you believe that God is always ready and anxious to have fellowship with individuals?					
31. Do you believe that God has nothing at all to do with your life?					

Place a check (✓) in column which most nearly represents your own belief.

	No Very Strongly	No	Not Certain	Yes	Yes Very Strongly
32. Do you believe that God can be reached with equal ease by every individual and in every place?					
33. Do you believe that God is an infinite Spirit, wise, loving, just, and powerful?					
34. Do you believe that God is the friend of everyone who has faith in him?					
35. Do you believe that everything is God and God is the only reality and that nothing real exists outside of God?					
36. Do you believe that God really revealed himself to us through Jesus Christ?					
37. Do you believe that God really reveals himself to us through nature?					
38. Do you believe that God is a single person and that there is but one such person?					
39. Do you believe that through faith you can have an experience of God just as real in its way as your experience with an earthly friend?					
40. Do you believe that God is still at work in the world?					
41. Do you believe that God is the Father only of certain individuals or groups and that he is not the Father of all mankind?					
42. Do you think that your answers to the preceding questions in this part of the test give a satisfactory picture of your belief about God?					
43. If you do not feel that your answers give a complete record of your belief, what else do you believe about God? Add below anything else you believe and check each of your statements in the proper column.					

Name..... Address.....

BIBLIOGRAPHY

BOOKS USED AS SOURCE MATERIAL

ATHEARN, WALTER S.—"The Church School." Pilgrim Press, Boston, 1914. 309 pages. A discussion of the Church School, giving the basis of grading.

ATHEARN, WALTER S.—"The Indiana Survey of Religious Education." In Vol. II, "Measurements of Standards in Religious Education." George H. Doran Company, New York, 1924.

BRIGHTMAN, EDGAR S.—"The Problem of God." Abingdon Press, New York, 1930. 209 pages.

BROWN, ARLO A.—"Studies in Christian Living." Closely Graded Series. Pilgrim Press, Boston, 1913.

BROWN, ARLO A.—"Youth and Christian Living." Graded Press, New York, 1929. 112 pages. A study course for Senior pupils in the Church School, including questions about God.

"BUILDING CHARACTER"—Proceedings of the Mid-West Conference on Parent Education, February, 1928. University of Chicago Press, Chicago. This summarizes the situation regarding character tests. (Address by Mark A. May, p. 8.)

CAIRD, JOHN—"An introduction to the Philosophy of Religion." James MacLehose and Sons, Glasgow, 1910. 343 pages. Presents various conceptions of God and religion.

"CREED AND CHRISTIAN CONVICTIONS, THE"—Course XIII of Christian Nurture Series, Department of Religious Education, Protestant Episcopal Church. Morehouse Publishing Company, Milwaukee, 1920. 203 pages. "This course aims to show to the pupil of high school age that religion is essential to the interpretation of all other facts."

FAIRBAIRN, ANDREW—"The Philosophy of the Christian Religion." The Macmillan Company, New York, 1928. 583 pages. Presents the Christian view of God.

FISKE, JOHN—"The Idea of God." Houghton Mifflin Company, New York, 1885. 173 pages. Traces the development of the idea of God in various forms.

FLEWELLING, RALPH T.—"Creative Personality." The Macmillan Company, New York, 1926. 320 pages. Discusses the relation of God to personality and conduct.

FORBUSH, WILLIAM B.—"Young People's Problems as Interpreted by Jesus." Charles Scribner's Sons, New York, 1913. 81 pages. "A course of study for classes preparing for Church membership." Planned for young people who are about sixteen years of age.

HOCKING, WILLIAM E.—"The Meaning of God in Human Experience." Yale University Press, New Haven. 586 pages. Describes and criticizes various conceptions of God generally held.

HOWLETT, WALTER M. (Editor)—"Religion the Dynamic of Education." Harper and Brothers, New York, 1929. Various addresses by leaders in the field emphasizing the importance of faith in God in education.

JONES, ARTHUR K.—"Education and the Individual." Century Company, New York, 1926. 225 pages. Contains an exposition of the objectives of public education.

MACHEN, JOHN GRESHAM—"What Is Faith?" The Macmillan Company, New York, 1925. 263 pages. A defense of the Christian conception of faith in God.

MICOU, RICHARD W.—"Basic Ideas in Religion." Association Press, New York, 1916. 496 pages. Presents differing conceptions and beliefs about God.

MUNRO, HARRY C.—"The Church as a School." Bethany Press, St. Louis, 1929. 270 pages. Discusses the administration of the Church School and suggests bases for classification of pupils.

NEUMANN, GEORGE B.—"A Study of International Attitudes of High School Students." Columbia University, Teachers College, New York, 1925. 120 pages. Presents a technique for constructing a test to discover attitudes.

STOUT, JOHN E.—"Organization and Administration of Religious Education." Abingdon Press, New York, 1922. 287 pages. Suggests bases for classification of pupils.

VIETH, PAUL H.—"Objectives in Religious Education." Har-

per and Brothers, New York, 1930. 331 pages. Presents the objectives of religious education generally accepted by outstanding leaders.

SOURCE MATERIALS IN PERIODICALS

JOHNSTON, CHARLES—"Theosophy." Theosophical Quarterly, Vol. XXVII, No. 1 (July, 1929). A brief statement of the present doctrines of the Theosophic Society.

JOSHI, S. L.— "Youth Creedless but Religious." The Literary Digest, April 13, 1929, p. 31. Report of a study of the religion of youth made by a professor of Dartmouth College.

LOVE, JULIAN PRICE—"Thinking Christianity Through." Teachers and Leaders of Seniors (Westminster Departmental Graded Materials), Vol. XIII, Nos. 1 and 2 (October, 1930; January, 1931). Courses of study for Senior pupils in the Church School, covering fundamental Christian beliefs.

RISLEY, JAMES H.—"The Eternal Problem of Youth." Teachers' Journal and Abstract, Vol. 1, No. 9 (November, 1926), pp. 608-614. Report of a questionnaire study of 300 high school seniors and juniors, including questions on religion, the Bible, and the Church.

WIDGERY, ALBAN G.—"Introductory to a Modern Philosophy of Religion." The Monist, Vol. XXIX, No. 3 (July, 1929), pp. 418-439. Criticism of various books in the field of philosophy of religion.

BOOKS ON TECHNIQUE

GARRETT, HENRY E.—"Statistics in Psychology and Education." Longmans, Green and Company, New York, 1926. 317 pages. The application of statistical methods to data obtained from test and experiment.

NEUMANN, GEORGE B.—"A Study of International Attitudes of High School Students." Columbia University, Teachers College, New York, 1926. 120 pages. Presents a technique for constructing tests to discover attitudes.

REEDER, WARD G.—"How to Write a Thesis." Public School Publishing Company, Bloomington, Illinois, 1925. 478 pages. A brief and concise description of the technique of writing theses.

RUCH, G. M.—"The Objective or New-Type Examination." Scott, Foresman and Company, Chicago, 1929. 488 pages. An introduction to educational measurement through the avenue of informal objective tests.

RUGG, HAROLD O.—"A Primer of Graphics and Statistics for Teachers." Houghton Mifflin Company, Boston, 1925. 142 pages. A simple introduction to the study of statistics.

RUGG, HAROLD O.—"Statistical Methods Applied to Education." Houghton Mifflin Company, Boston, 1917. 410 pages. A textbook for students of education in the quantitative study of school problems. The book gives a thoroughgoing discussion of statistical methods.

THURSTONE, L. L., and CHAVE, E. J.—"The Measurement of Attitude." University of Chicago Press, Chicago, 1929. 97 pages. A monograph describing the construction of an attitude scale, using the often-noticed difference as a unit of measurement.

TRELEASE, SAM F., and YULE, EMMA S.—"Preparation of Scientific and Technical Papers." Williams and Wilkins, Baltimore, 1927. 117 pages. A brief but complete discussion of the preparation and editing of scientific papers.

WATSON, GOODWIN B.—"Experimentation and Measurement in Religious Education." Association Press, New York, 1927. 295 pages. Discusses the construction of tests and the use of statistical methods in religious education. Also contains the description of tests available in the field.

WATSON, GOODWIN B.—"The Measurement of Fair-Mindedness." Columbia University, Teachers College, New York, 1925. 97 pages. Description of the technique used by Watson in constructing an instrument to measure the attitude of fair-mindedness.

PERIODICAL ARTICLES ON TECHNIQUE

BAIN, READ—"Theory of Measurement of Attitudes and Opinions." Psychological Bulletin, Vol. XXVII (1930), pp. 357-379. Gives a bibliography of the field since 1925.

ROSSANDER, A. C.—"Can Attitudes Be Measured?" Phi Delta Kappan, Vol. XIII, No. 3 (October, 1930), pp. 75-79, 90-93. The discussion and evaluation of different techniques for measuring attitudes.

THORNDIKE, EDWARD, L.—"Handwriting." Teachers College Record, Vol. XI, No. 2 (March, 1910), pp. 86, 87. A discussion of the theory underlying the building of the handwriting scale.

THURSTONE, L. L.—"An Experimental Study of Nationality Preferences." Journal of General Psychology, Vol. I (1928), pp. 405-425. An application of Thurstone's technique for measuring attitudes.

THURSTONE, L. L.—"A Mental Unit of Measurement." Psychological Review, Vol. XXIV (1927), pp. 415-423. A discussion of the unit of measurement at the basis of his technique for measuring attitudes.